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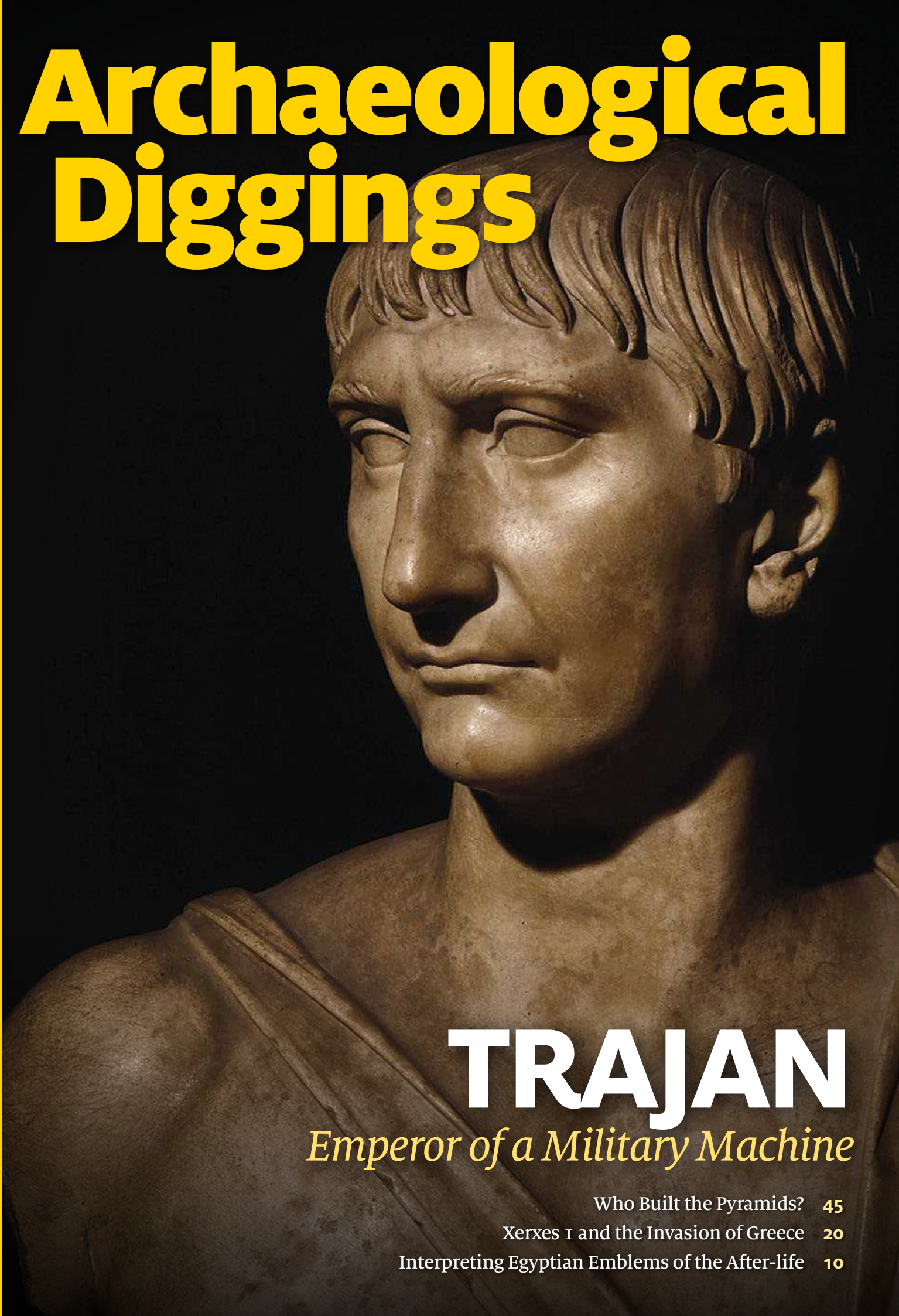

TRAJAN

Emperor of a Military Machine

Who Built the Pyramids? 45
Xerxes I and the Invasion of Greece 20
Interpreting Egyptian Emblems of the After-life 10

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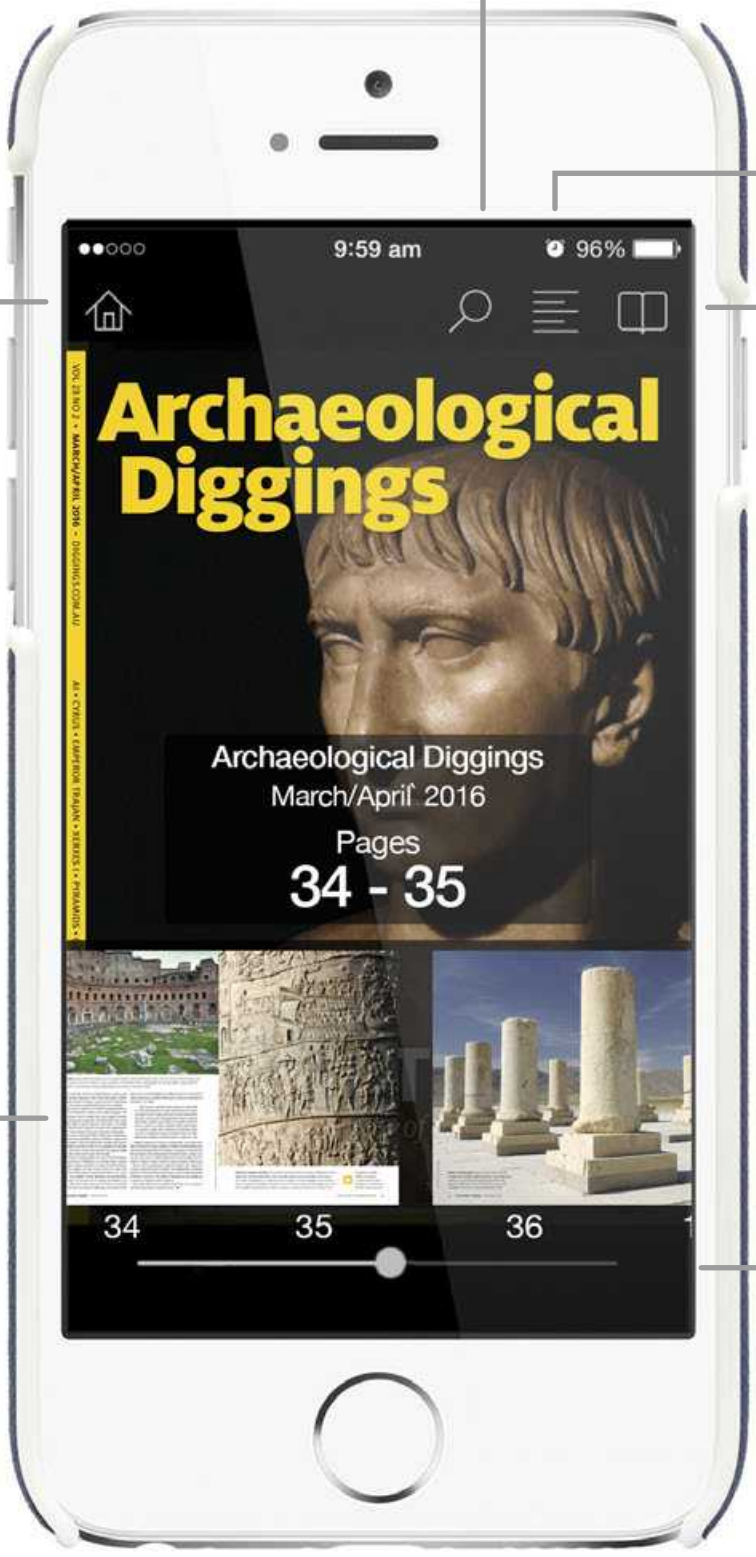

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CONTENTS
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Return to the issue library

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BRITTANY, FRANCE
Surrounding the village of Carnac in France is the largest known collection of megaliths in the world. Claimed to be Neolithic, 3000 locally-cut stones are aligned in long rows and circles in relatively dense formations.
52 Archaeological Diggings— March/April 2016

GENERAL NAVIGATION
Swipe your finger horizontally to go to the next or previous page

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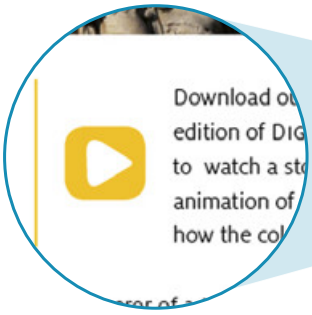
Double tap in the same spot or spread with 2 fingers to inlarge. Double tap to unzoom



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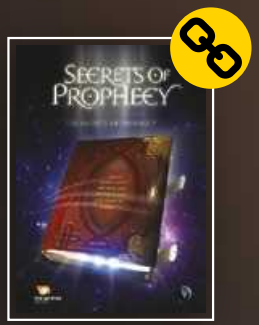

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Living Well

Contents

Archaeological Diggings
Volume 23 Issue #2
March/April 2016

Features

10 May Your "Ba" Be With You
Ancient Egyptians had a focus on entering the after-life. So what, exactly, did they believe?

14 Archaeological Mystery of Ancient Ai
Where *is* the site of this most ancient settlement?

20 Xerxes' Greek Campaign
Under Xerxes' leadership, Persia was an irresistible force. How did the Greeks stop them?

28 Trajan, Emperor of a Military Machine
Military success was his road to emperorship, so there is no surprise that under Trajan's direction, the Roman empire reached its greatest extent.

34 Cyrus and the Ancient Psychics
His name and deeds were foretold decades before his birth.

45 Aliens or Egyptians: Who Really Built the Pyramids?
The Why and the How are the points of this sensationalist debate.

54 *The Innocents Abroad*: Jerusalem, Again!
Join Mark Twain as he revisits the sights and sites of the old city of Jerusalem.

Regular Features

5 Editor's Comment
The Real Value of the Ancient Law

6 From Jerusalem
With Danny Herman

41 The Archaeologist
Gertrude Caton-Thompson

52 Archaeological Insights and Interesting Facts
7 Interesting Stone Circles from Around the World

60 News from the World of Archaeology
Persepolis on display, Mythical tomb of Osiris uncovered, Mosaic Bible inscription discovered, Fifth Dynasty queen unearthed, Discovering the origin of the alphabet and more.

65 The Agora
Community news, letters, events and notes of interest.

66 Archaeological Puzzle
Alphabet Soup

Subscribe now > 9
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ON THE COVER: Marble bust of the Roman Emperor Trajan, from AD 108, on display in the Capitoline Museum, Rome. Trajan was emperor from AD 53 to 117.

Photo: Gianni Dagli Orti—Alamy

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The REAL VALUE of the ANCIENT LAW

Just before Christmas last year, Sotheby's auctioned a complete copy of the Babylonian Talmud for a record breaking $US9.3m. The Talmud, or "Oral Law," is a compendium of hundreds of years of rabbinical discussion and argument concerning the exposition of the laws of the Bible. The first complete edition of the Babylonian Talmud was the product of Daniel Bomberg, who commenced his work on it in 1519 and completed it in 1523. It is one of the most significant books in the history of Hebrew printing and one of the greatest books of the Western world. Only 14 complete copies of his sixteenth century work survive.

For centuries, one copy was housed in the library of Westminster Abbey. In 1956, collector Jack Lunzer became aware of the Abbey's magnificent and complete copy, and vowed to one day acquire it. He spent the next 25 years seeking to fulfil this almost impossible dream. Finally, he came up with an ingenious scheme to persuade the Abbey to sell it to him. After purchasing a 900-year-old copy of the Abbey's original Charter, he exchanged it, along with supporting endowments, for the Abbey's copy of the Bomberg Talmud. It was this copy that was auctioned just before last Christmas.

Rather than being the actual laws themselves, the Talmud was of course just the ancient arguments over the laws written down by Moses, that are now part of the Bible, and which at their centre, include the famous Ten Commandments. These ten great principles have been, until recently, the basis for social law and order in Western society. However, these principles are being eroded at an accelerating rate.

British historian, Sir Arnold J Toynbee, after analysing 21 ancient civilisations, sounded an ominous warning to today's civilisation when he noted that one of the signs of a civilisation in disintegration and collapse was that of a sense of "abandon"—"a state of mind that accepts antinomianism [an Old English word for lawlessness] . . . as a substitute for creativeness" *(A Study of History,* Vol. 5 p. 399). In other words, a disregard of moral law and values. If a copy of the ancient Talmud's arguments over the law are of such great monetary value, perhaps society should better value the actual principles of the moral law (the Ten Commandments) than it does.

Well, I know you will value this edition of *Diggings,* because it is full of great reading: the achievements of King Cyrus of Persia, and the emperor Trajan; the Egyptian understanding of the after-life as evident in its tombs and on it monuments; the second Persian campaign against Greece; the evidence about how the great pyramids of Egypt were built; and, the mystery of why the biblical city of Ai has been said to have been vacant during the Middle and Late Bronze Ages. Happy reading!

Gary Webster

Gary Webster, Editor

DANNY HERMAN
Israeli archaeologist and tour guide with a passion for sharing the history of his country with visitors.

ANOTHER INTERPRETATION TO THE HEZEKIAH BULLA

ABOVE: Dr Eilat Mazar displays a clay imprint during a news conference at The Hebrew University in Jerusalem. The imprint, known as a *bulla*, was unearthed in excavations near Jerusalem's Old City. It was later identified to be a seal of the biblical King Hezekiah.

BELOW: The 2700-year-old royal seal bearing the mark of the biblical king Hezekiah. What does the symbol of the winged sun disk mean?

Like many others, I was very excited by the discovery of the stamped clay seal (*bulla*), struck by the seal "of Hezekiah [son of] Ahaz, King of Judah" (see page 62, January/February 2016 issue). Such artefacts have been known of in the antiquities market since the 1990s, but only in 2015 had such a bulla been found in a proper excavation; this one in the area between the City of David and the Temple Mount (the Ophel). The 1-cm-diameter bulla was originally used for sealing a document made of papyrus, so unfortunately is not attached to anything. It bears a seal impression of a winged sun disk and *Ankh* Egyptian symbols. The paleo-Hebrew inscription associated with King Hezekiah is above and below it.

Dr Eilat Mazar, who discovered the bulla, is of the opinion that the symbol of the winged sun disk represents God's protection, and she associates it with the last years of the reign of King Hezekiah. But I argue for a different explanation.

In 705 BC, Sargon II, the king of Assyria, died in eastern Turkey, perhaps killed in an ambush. This led to a rebellion of several provinces in the west, including Judah, incited by Egypt. It seems that Hezekiah, king of Judah, emphasised his political ties with the Egyptians at the time, and so when commanding the making of many storage jars, had their handles stamped with a scarab as the main symbol. In a similar way, also in his royal seal, he chose Egyptian symbols—the winged sun god and the Ankh. The prophet Isaiah, in fact, warned Hezekiah against relying on the Egyptians:

> *"Tell Hezekiah . . . 'Look, I know you are depending on Egypt, that splintered reed of a staff, which pierces the hand of anyone who leans on it! Such is Pharaoh king of Egypt to all who depend on him' "* *(Isaiah 36:4–6).*

So this is not an unreasonable deduction, as according to the Bible, Sennacherib failed to conquer Jerusalem (2 Kings 19:36) and Hezekiah continued to reign until 696 BC. Now, some 2700 years later, a stamped clay seal of a document he approved was discovered by a descendant of his culture.

PHOTO: AMIR COHEN—REUTERS—PICTURE MEDIA | OURIA TADMOR

DEUTCH SUES FOR US$3.2M

Robert Deutch is one of the most famous antiquities dealers in Israel, and the only one to operate annual auctions of artefacts. Some 10 years ago, he was accused of forgery by the IAA in respect of the now famous "James brother of Jesus ossuary," which the IAA argued was a clever forgery. For almost a decade, the state pursued him and the owner of the ossuary, Oded Golan, and eventually brought them to trial. Now, both have been acquitted and the ossuary returned to Golan.
I recently spent some time with Deutch (pictured above, left), who says the long trial trashed his reputation as an honest and reputable antiquities dealer. As such, and having been acquitted, he is now seeking reparation for his legal expenses and damages. He is suing the IAA for more than US$3m.
But what will be the verdict on this trial?

PHOTOS: IAA | DANNY HERMAN

SUPREME COURT RULES

Israel is one of the few countries around the Mediterranean that allows the trade of antiquities, albeit heavily regulated. In 1978, a law was passed to reduce this trade, however, nothing much changed. The Israel Antiquities Authority (IAA) estimates that many dealers simply sell their artefacts for cash, replacing the item sold with a similar undocumented one. This being so, a new regulation was passed requiring antiquities to be photographed and catalogued, a rule that a group of 15 antiquities dealers appealed to the Supreme Court of Israel. Now the Court has approved the new regulation.
But will it end the trade in antiquities? Only time will tell.

RIGHT: An IAA inspector checks the written index of an antiquities dealer in the Old City of Jerusalem. New regulations will force dealers to generate a photographic index of their antiquities, in an effort to reduce illegal trading.

LOD MOSAIC FORMS FLOOR OF NEW CENTRE

In 1996, an almost complete and exceptionally beautiful mosaic floor of a manor house from late Roman times was discovered in the city of Lod, some 20 km (12 miles) east of Tel-Aviv. The mosaic was uncovered during construction of a new pipeline. It was relocated for treatment and eventual display at the Metropolitan. Since then, it has toured the world, and is currently on display in a Venice art gallery.

Recently, new excavations were carried out at the site of the discovery with a view to creating a visitor centre for the history of Lod.

Then, as the excavation work began, and to everyone's surprise, yet another beautiful mosaic floor surfaced! This mosaic, which depicts hunting scenes, fish, flowers in baskets, vases and birds, is similar in style to the previous discovery, suggesting it was probably in another wing of the same Roman mansion.

In light of the new discovery, it is proposed that the mosaic be incorporated into the new visitor centre.

TOP: An IAA employee sweeps and wets the newly uncovered mosaic of a Roman villa floor in Lod, highlighting its beautiful motifs and intricate detail.

LEFT: Detail of the mosaic, showing rural life, flora and fauna and scenes.

PHOTO: ASSAF PERET / CLARA AMIT—IAA

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May Your "Ba" Be With You

The ancient Egyptians lived their lives with two main concerns: a happy life here and being able to enter the afterlife when they died. **Suzette Hartwell** looks at their beliefs about the afterlife and personhood.

WHAT WOULD THE BODY, SHADOW, NAME and the soul possibly have in common? To the ancient Egyptians, these components together with other intangible elements formed the concept of "self" and human nature, taking one from birth and ideally into a successful afterlife. In a land that had a plethora of gods, even the individual was believed to be formed from five separate parts, specifically the *body*, the *name*, the *ba*, the *ka* and the *shadow*. By their re-unification after death that had separated them, a rebirth could occur and the deceased was able to go onto the afterlife, evolving into another form called the *akh*. The re-unification process entailed the correct reciting of appropriate spells and ceremonies. It was believed that without these elements, humans could not exist after death, and this aspect was an equal notion from pharaoh to commoner.

Humankind has long pondered the concepts of identity, the elements or essence that make up a person beyond the flesh and blood. The conviction of there being more to existence than just what is apparent on earth is demonstrated by the placement of burial goods with a deceased person for their use in the next life, beyond the realm of the living. A long time before recorded history began in Egypt, there is evidence of burial goods placed with the deceased dating to the Badari-Naqada period (c.4400–3000 BC*). Even at that early stage, items such as pottery bowls for food, some simply formed and others elaborately painted, slate pallets for grinding eye makeup, jewellery and even clay models of garlic have been discovered, all intended for use in the afterlife that was thought to be a replica of life on earth. So what were these esoteric elements that made up the identity of a person?

PHOTO: ALAMY

A BA AMULET, found on the body of Prince Hornakht, son of Osorkon II from around 874–850 BC. *Ba* was the "spiritual manifestation" of the deceased and was portrayed as a human-headed bird, usually a human-headed falcon. Amulets such as this assured the deceased of reunion with his soul, which could leave or enter the tomb at will.

THE KA

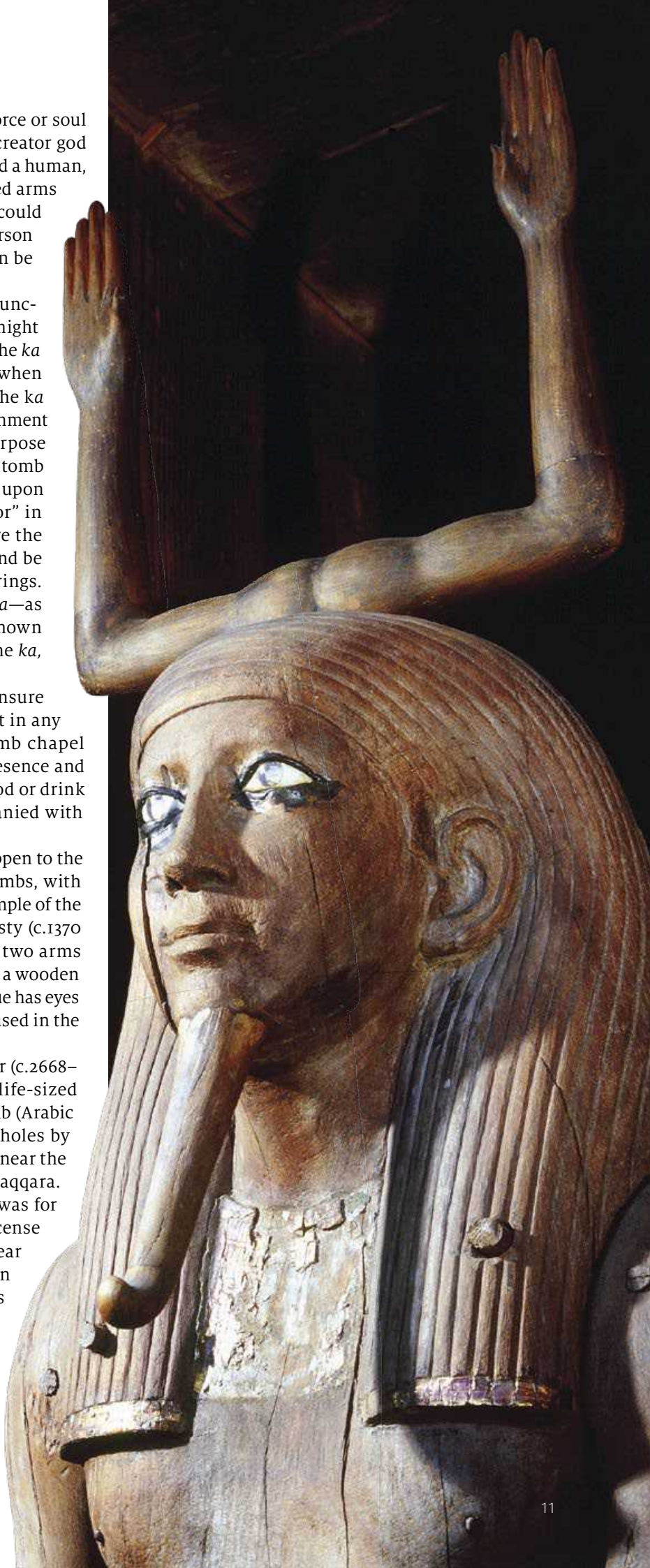
Ka was considered to be the creative life force or soul of a person, fashioned by the ram-headed creator god Khnum on a potter's wheel. As Khnum created a human, he also formed the *ka* as the icon of two raised arms bent at the elbow. This aspect of humanity could also be depicted as a smaller version of the person as is sometimes seen in funerary art and can be translated as "double."

The *ka* as the life force also had another function: as conscience. One accused of a crime might lament, "My *ka* is good; what have I done?" The *ka* stayed with the person during their life but when the *ka* left the body, death was the result. The k*a* lived on after death requiring the same nourishment that the person had in life. This was the purpose behind funerary food offerings depicted on tomb walls, including the placement of real food upon a stone stela on the ground. The "false door" in tombs also served as a crossing point where the spirit of the deceased would pass through and be nourished from the essence of the food offerings. For the nourishment to be absorbed by the *ka*—as opposed to physically eating it—the spell known as the Offering Formula was addressed to the *ka,* sustaining its life force.

Remaining with the mummified body to ensure its survival in the afterlife, the *ka* also dwelt in any images of the deceased as well as the tomb chapel and burial chamber. Acknowledging the presence and importance of the k*a* during one's life, as food or drink was given to a person it was often accompanied with the words "For your *ka*."

To safeguard the *ka*, should something happen to the mummy, *ka* statues were often placed in tombs, with many being life-sized, as in the wooden example of the pharaoh Awibra Hor of the thirteenth dynasty (c.1370 BC). This striding statue of Awibra's *ka* has two arms outstretched above his head and is housed in a wooden *naos* or shrine. At 170cm tall, this wooden statue has eyes inlaid with quartz and rock crystal and is housed in the Egyptian Museum, Cairo.

The *ka* of the third dynasty pharaoh Djoser (c.2668–2649 BC*) was exemplified by a limestone life-sized seated figure of him enclosed within a serdab (Arabic for cellar), a closed vault, save for two eyeholes by which this statue is observable. It is located near the northern entrance to his Step Pyramid at Saqqara. The function of this small limestone room was for the *ka* to absorb the offerings of food and incense that were viewable upon the altar placed near the eyeholes. The original statue is located in the Cairo Museum, while the serdab houses



KA STATUE OF THE PHARAOH AWIBRA HOR, on display at the Egyptian Museum, Cairo. A *ka* statue was intended to provide a resting place for the *ka,* or spirit, of the person after death.

SPIRIT FLIES FREE. Wall painting in the tomb of the royal tomb builder Pashedu, in the Deir el-Medina necropolis, Luxor, depicting the deceased communicating with his *ba* bird.

a replica. Viewing this statue near his pyramid, which seemingly looks right back at you from a confined space, can be a trifle confronting!

THE BA

Ba was represented as a human-headed bird, and was regarded as the personality or spirit force while also signifying power. Basically it was what made the person an individual, excluding the body. The essence of the ba is what many might claim to be the soul, or the spirit of a person they suppose goes beyond the death. Intriguingly, as power it could include inanimate objects and gods. As a physical entity of the god Osiris, the Apis bull was considered to be his *ba,* while the *ba* of the god Horus were his four sons, namely Imsety, Duamutef, Qebehsenuef and Hapi.

As an aspect of daily life, the *ba* remained with a person from birth, continuing to be linked with the body to ensure its survival in the afterlife. For the *ba* to leave the body and not return would mean the total obliteration of the person with no hope of rebirth. A literal account of this fear has been preserved in the tale called "A Dispute Between a Man and His Ba." In the story, a man longs for death, as he is disillusioned by what he sees around him, so complains about life. The criticisms about life anger his *ba,* which threatens to leave him, shocking the man. The *ba* explains that life is for living whereas death is a sad affair and whether a grand tomb or none, the dead are no better off. After a discussion of life and death it concludes:

> *What my ba said to me: "Now throw complaint on the [wood pile], you my comrade, my brother! Whether you offer on the brazier, whether you bear down on life, as you say, love me here when you have set aside the West! But when it is wished that you attain the West, that your body joins the earth, I shall alight after you have become weary, and then we shall dwell together!" (Papyrus Berlin 3024, translated by Lichtheim, 1975, p. 169)*

The *ba* also needed to be nourished like the *ka,* partaking of the offerings, and was capable of flight. Representations of the *ba* may show it flying toward the image of the body in a tomb, sitting in a tree or drinking from a pond. Its significant function was to fly through the underworld or *duat* and could avoid the dangers of this journey by changing shape as needed, reuniting with the *ka*. This unifying process then changed the deceased into another entity known as an *akh* or a blessed transfigured spirit, the ultimate afterlife.

THE AKH

In its physical form, the *akh* was depicted as a *shabti*, a mummiform figure. In hieroglyphs, it took the icon of the crested ibis, *Geronticus Eremita*. The *akh* denoted the ability or function of effectiveness, a significant aspect of both life and after death. The conversion into an *akh* became an eternal and constant entity of light that was connected to the gods and the stars. The transformation was not a given, however. One had to earn this by having

PHOTO: JNERAD—DREAMSTIME.COM

OBLITERATING A NAME. Following Hetshepsut's death her statues were defaced and her name obliterated from several sites in Egypt. The queen's name was also omitted from lists of kings compiled later, such as the Adydos Kings List. Such defacement and destruction some historians believe had to do with destroying Hatshepsut's *Ka* (spirit) after her death.

lived a good life according to the rules of ma'at—truth, justice and divine order. In the liminal state between life and death where the living could enter as they slept, it was believed possible to view *akhs,* as they were an ever-present entity.

A spell from "The Book of the Dead" maintains that the *akh* is in the same guise as the person looked in life:

> *"I have entered [the transition to the after world] as an ignorant one. I have come forth as an able akh. I shall be seen in my human form forever." (Teeter, 2011, p. 149)*

THE NAME, SHADOW AND BODY

"Speak of the dead and they shall live again," the ancient texts relate, and the living obliged, ensuring the eternal life of the departed. Inscriptions in tombs of the name of the deceased along with incantations were especially effective when read aloud. Indeed, messages in tombs called "Appeals to the living" invoked the visitor to say aloud the name and a prayer, perhaps the recitation of food offerings as well, assisting the departed in the afterlife to flourish. On the contrary, destroying the name was a serious act that would result in the existence and memory of the person being obliterated. This was exemplified when a previous pharaoh's name was removed from temples, tomb walls, statues and sarcophagi and subsequently usurped and re-inscribed with the new ruler's name. By obliterating a name, or by not even mentioning it, as in the Abydos Kings List created by Seti I, previous controversial and unaccepted rulers such as Akhenaten, Tutankhamun and Hatshepsut are not even mentioned—therefore they had not existed in the minds of the rulers and Egyptian society.

Shadow In a country of extreme heat, a shadow represented protection. Known as *shwt,* the shadow could only exist with the sun, but it was also a separate entity that left the body upon death and so required incantations to return. The shadow was a powerful entity and the ultimate icon of rebirth and resurrection.

Body The combination of all these elements made up the spiritual essence of the body and its preservation by mummification was essential. The body needed to survive in order for the spirit or life force to go on in the afterlife. The most significant organ was the heart, believed to be responsible for emotion and thought, and the brain.

The journey into the afterlife could be fraught with all manner of peril, but help was at hand with a number of guidebooks instructing how to make a safe transition, which (or relevant sections of them) were often inscribed on tomb walls. This essential journey could be made safe by the recitation of certain spells by both the deceased and priest on behalf of the person or ruler, as read from special books. ◆

* All dated events in this article are according to the commonly accepted Egyptian chronology.

PHOTO: WILLIAM MCKELVIE–ISTOCKPHOTO.COM

Archa Mys Anci

eological tery of ent Ai

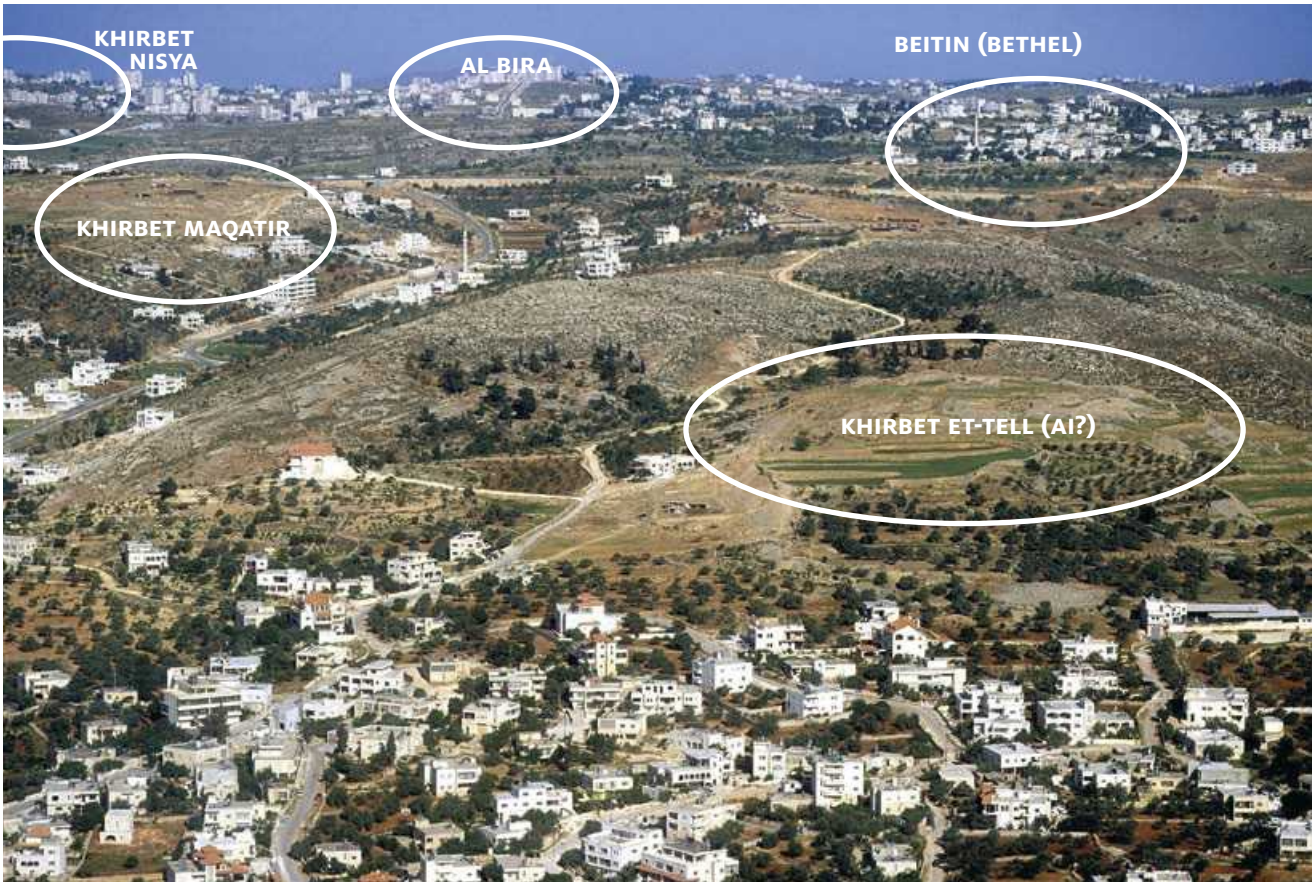
Titus Kennedy investigates the geographic options for the biblical city of Ai, destroyed by Joshua in the Jewish invasion of Caanan.

THE CITY OF AI, LOCATED IN THE CENTRAL highlands region of Canaan just west of the Jordan River, is mentioned in biblical narratives concerning the life of Abraham in Canaan and again in the initial conquest of Canaan under the leadership of Joshua (Genesis 12:8; Joshua 7:2). Being so documented, one would expect to be able to find archaeological evidence that the city existed in the times of Abraham and of Joshua if the narratives are historically accurate. However, the geographical site identified as the location of ancient Ai—Khirbet et-Tell—has been regarded by most scholars as vacant throughout the Middle and Late Bronze Ages (2000–1200 BC), from before the time of Abraham to after the time of Joshua, calling into question the reliability of these narratives. As a result, scholars have both suggested that the stories are merely legends, or alternatively, that the city of Ai could have been located elsewhere. This has led to a variety of sites within the region being surveyed, excavated and argued over as the correct site of ancient Ai. Yet, the generally accepted notion that Khirbet et-Tell was a vacant, unoccupied ruin during the times of Abraham and Joshua does not appear to be correct when all of the archaeological evidence from the site is taken into consideration and analysed.

The American archaeologist William Albright was the first to conduct a survey of Khirbet et-Tell, in the 1920s, and his findings prompted him to report that the city had been occupied in the Middle and Late Bronze Ages—the time of Abraham and Joshua—among other periods, with a gap in occupation beginning around 1400 BC. Soon after, the British archaeologist John Garstang conducted another short excavation at the site, and his findings appear to confirm the previous assessment that the site was occupied in the Middle and Late Bronze Ages, and again concluding about 1400 BC before eventually being resettled in following centuries. However, the next excavation, directed by Judith Marquet-Krause in the 1930s, reported that there was a long occupational gap that encompassed centuries before Abraham until 200 years or more after Joshua, implying that the biblical narratives concerning Ai were legendary, mythological and unhistorical. A little more than 30 years later, another excavation directed by Old Testament professor Joseph Callaway came to similar

AERIAL VIEW OF AI? The archaeological site of Khirbet et-Tell, due to its location, geography and size, had been tentatively identified as the ancient city of Ai by the nineteenth century. The site contains a (1) sanctuary (2) Early Bronze Age temple (3) Early Iron Age village (4–5) fortifications and lower city Bronze Age walls.

PHOTO: J KRAMER



THE IMMEDIATE VICINITY OF KHIRBET ET-TELL has a cluster of Middle and Late Bronze Age sites located approximately 3.5 km (2 miles) or less from each other. Following Callaway's conclusion that Khirbet et-Tell was the location biblical Ai, and that the biblical story of Ai was fictional, other scholars began looking for alternative candidates for Ai. West of Khirbet et-Tell lies Beitin (Bethel), Al Bira, Khirbet Nisya and Khirbet Maqatir, while south is Deir Dibwan (not shown), and Khirbet Haiyan, which have all been raised as possible alternative sites.

conclusions: that the site was unoccupied around the times of both Abraham and Joshua.

It has been more than 40 years since the last excavations at Khirbet et-Tell, and the notion that the city was unoccupied during those periods has been maintained in scholarship, causing many to regard the conquest of Ai under the leadership of Joshua as unhistorical. Explanations for the mention of Ai in the travels of Abraham often explain it as a reference to a ruined city that was unoccupied at the time.

So is Khirbet et-Tell the site of ancient Ai, or should we look for a city somewhere else? Was the city of Ai really vacant from before the time of Abraham to after the time of Joshua? Why does there appear to be a discrepancy between the reports of different archaeologists?

THE OPTIONS

The archaeological site of Khirbet et-Tell was identified as the ancient city of Ai at least as early as the nineteenth century, although the association was initially tentative. Because of clues in the books of Genesis and Joshua, such as Ai being west of, and up, an ascent from Jericho, east of Bethel, a large and fortified city, a hill between Bethel and Ai, and a valley to the north of Ai (Genesis 12:8; Joshua 7:2, 8:11, 8:29), explorers and archaeologists saw the site of Khirbet et-Tell as a most obvious candidate for the location of ancient Ai. Khirbet et-Tell is east of Beitin (which reflects preservation of the ancient name of Bethel through Arabic), and it is the only other large and fortified settlement in the region fitting the description of a prominent city. Therefore, most scholars have been convinced that Khirbet et-Tell is ancient Ai and no other site in the area could fulfil those requirements. However, when the reports of the Marquet-Krause and Callaway expeditions concluded that the city was unoccupied in the time of Abraham and Joshua, a serious problem arose. Either the stories about Ai in the books of Genesis and Joshua were not historical, the site of Khirbet et-Tell was not the location of Ai or the earlier archaeological conclusions were wrong. Most scholars concluded that either the narratives were unhistorical or the site of Ai was located elsewhere.

Archaeological work has revealed that numerous archaeological sites in the immediate vicinity of Khirbet et-Tell were occupied in the Middle and Late Bronze Ages, during the times of Abraham and Joshua. Khirbet Haiyan, a small site to the southeast of Khirbet et-Tell, was found to contain material from the Middle Bronze Age. Al-Bira, a modern town covering an ancient settlement to the west and slightly south of Khirbet et-Tell, also yielded Middle Bronze Age pottery. Beitin, identified as ancient Bethel, is located west of Khirbet et-Tell, was occupied in the Middle and Late Bronze Ages, and was a town of considerable size in those periods (Genesis 28:19; Joshua 8:17).

THE EARLY BRONZE TEMPLE. This large rectangular building, measuring about 25 m (80 ft) long, was discovered in the excavations of Khirbet et-Tell. The function of the building is disputed—originally archaeologists believed it was a palace, however after cultic artefacts were discovered it may have later been turned into a temple. Inside, four rectangular pillar bases were found, created using an Egyptian method of sawing and chiselling stone to make a flat surface. The pillars placed upon these bases would have supported the roof.

PROS AND CONS

Khirbet Nisya, which one archaeologist proposed as a possible alternative site for Ai, is located southwest of Khirbet et-Tell and was occupied in the Middle and Late Bronze Ages. However, the site is so small that it does not fit the description of a city or a town, it had no apparent fortifications, and it continued to be occupied after the 1400 BC conquest of Ai. Khirbet Maqatir, another proposed alternative location for ancient Ai, is located west of Khirbet et-Tell, was occupied after the time of Abraham near the end of the Middle Bronze Age and into the Late Bronze Age and time of Joshua, and according to the excavation, had fortifications. However, this site is only the size of a small village or outpost, not a large city, and it is located more south of Bethel than east, suggesting that this could have been the site of Beth-Aven instead (Joshua 7:2). Finally, the modern village of Deir Dibwan, located adjacent to the southeast side of Khirbet et-Tell, had archaeological material from the Middle Bronze Age discovered in a survey. One of the most obvious conclusions from discoveries at these sites is that in the area within a few kilometres of Khirbet et-Tell, numerous settlements were occupied during the times of Abraham and Joshua. Yet, was Khirbet et-Tell or the ancient city of Ai abandoned during these periods?

The main problem in connecting the narratives about Ai to Khirbet et-Tell has been the supposed occupational gap at the site from before the time of Abraham to after the time of Joshua. This conclusion was based on an apparent lack of archaeological finds from the Middle and Late Bronze Ages. As mentioned, both Albright and Garstang reported discovering material from these missing periods. Albright surveyed the site and found Middle Bronze and Late Bronze I pottery fragments, which he noted had clear chronological connections to another site he had excavated, Tell Beit Mirsim. Garstang excavated eight trenches at the site. His findings agreed with those of Albright, and further suggested that the site was occupied from the Middle Bronze Age until the end of Late Bronze I at about 1400 BC, including a Cypriot wishbone handle from a "milk bowl."

According to biblical chronology, the expected destruction and abandonment of Ai after the attack by the Israelites under Joshua would have been just before 1400 BC. However, Albright and Garstang were not the only archaeologists to discover material from these periods at the site of Khirbet et-Tell. According to the main archaeological expert on the staff of the Marquet-Krause excavation, Shmuel Yeivin, what appeared to be Middle Bronze Age and Late Bronze Age pottery was discovered but not included in the final excavation report. Marquet-Krause herself even remarked in an article that the excavation found pottery that appeared to be from the beginning of the Middle Bronze Age at Khirbet et-Tell. However, since Marquet-Krause

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PHOTOS: TODD BOLEN—BIBLEPLACES.COM

WALLS OF KHIRBET ET-TELL. The site of Khirbet et-Tell covers 27 acres and includes a solid city wall with semi-circular towers. It is commonly believed, contra to the biblical record, that the city was only inhabited in the Early Bronze. This conclusion was based on an apparent lack of archaeological finds from the Middle and Late Bronze Ages. However, architecturally, the city wall shares similarities with Middle Bronze Age walls at other sites in the region, such as Bethel, Jericho and Shechem.

died before excavations were concluded, her husband compiled her notes and published an incomplete report of findings at the site. Subsequent analysis of the pottery excavated by this expedition reveals many pottery vessels and fragments that appear to date to the Middle and Late Bronze Ages.

About 30 years later, another team led by Callaway conducted excavations at Khirbet et-Tell and carried out archaeological work at smaller sites nearby. Although the conclusions of this expedition stated that the site was unoccupied in the Middle and Late Bronze Ages, Callaway mentions a Late Bronze Age style cooking pot found at the site, a type of bowl also found in Middle and Late Bronze Age contexts at other sites, and several pottery examples from the excavation also appear to match specific types of the Middle and Late Bronze Ages. Thus, it seems that four separate archaeological teams discovered material from the Middle and Late Bronze Ages at Khirbet et-Tell, even though the general consensus considers the site to have been unoccupied during these periods. Perhaps less material from these periods has been found at the site than would be expected for a large city, but excavations have been limited in scope and the main area of the settlement from the Middle and Late Bronze Ages may have been located outside the acropolis and in the lower city or under the modern town of Deir Dibwan. The main city wall

The Rise and Fall of Ai

2400 BC *Conventional archaeology concludes Khirbet et-Tell was a thriving city up until 2400 BC.*

EARLY BRONZE AGE

3000 BC

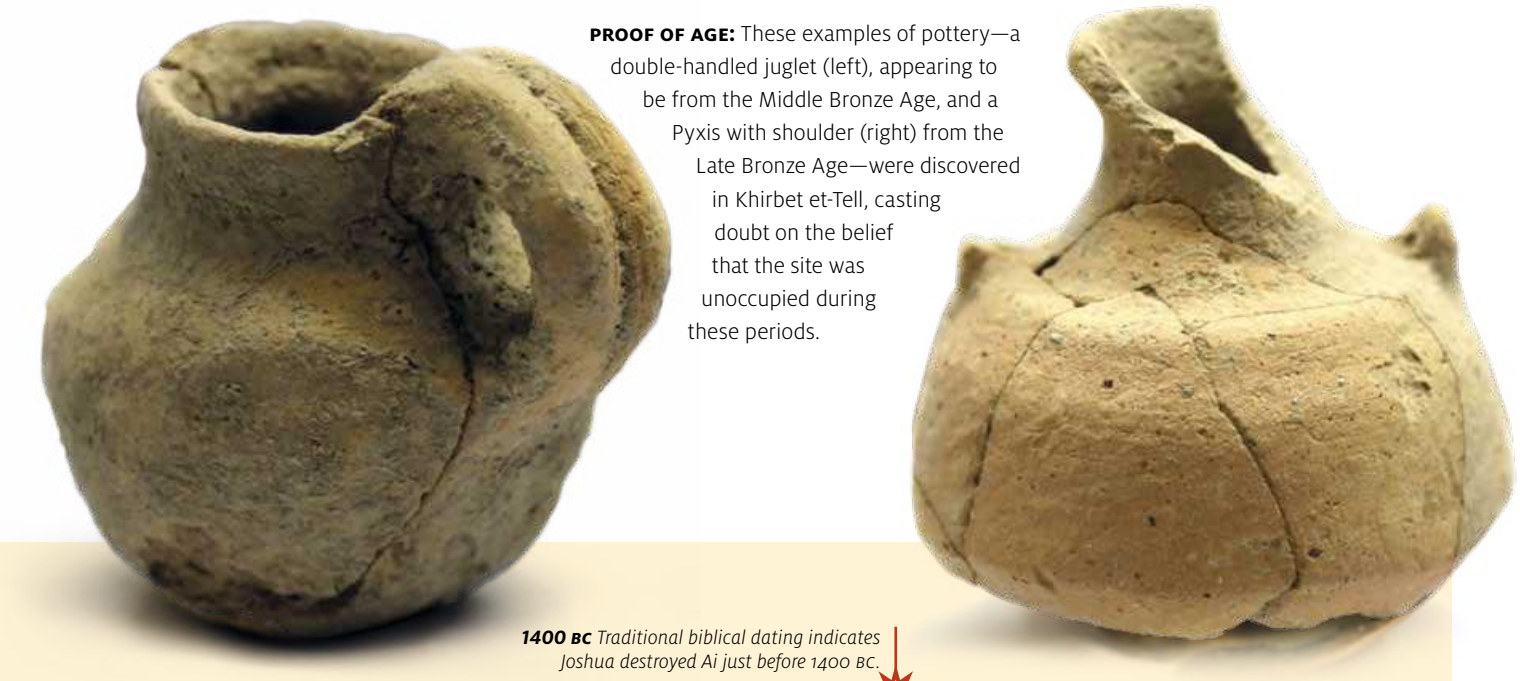
itself even appears to support the idea that the city was occupied in the Middle Bronze Age. During excavations, Garstang found Middle Bronze Age pottery in the city wall, dating the construction or reconstruction of the wall to the Middle Bronze Age. Architecturally, this city wall also shares similarities with Middle Bronze Age walls at other sites in the region, such as Bethel, Jericho and Shechem.

Further, architectural analysis of an important building at Khirbet et-Tell may provide additional evidence that the site was occupied during the Middle and Late Bronze Ages. The Bronze Age temple, or sanctuary, at Khirbet et-Tell is usually considered to be a structure only in use during the Early Bronze Age. This idea is tied to the hypothesis that the site was abandoned during the Middle and Late Bronze Ages, and therefore it could not have been in use in the subsequent periods. However, recent analysis and comparison of the excavations, architecture and pottery suggests that the structure may have been modified and used in the Middle and Late Bronze Ages.

Within the confines of the sacred area was an altar, broken standing stones and many ritual vessels. An examination of the walls of the temple reveals at least three major building phases, clearly distinguishable by the different types of stone masonry used in construction. While multiple phases themselves do not necessitate that the temple would have been in use centuries later than is typically regarded, the type of masonry and comparisons to an important nearby site suggest that the temple was subsequently expanded and then finally remodelled in its final phase during the Late Bronze Age. At the ancient city of Bethel, only about 1.8 km (1 mile) to the west, a Late Bronze Age temple excavated there reveals exactly the same, distinct type of masonry used at the Khirbet et-Tell temple. This masonry uses much smaller rectangular stones than the earlier periods. Thus, it appears that the temple was initially built in the Early Bronze Age as a high place with a large round altar, expanded in the Middle Bronze Age into a U-shaped temple and remodelled in the Late Bronze Age.

Excavations also revealed another interesting discovery about the fate of this temple—it had been buried under a massive pile of stones about six metres high and never re-used, rebuilt or uncovered during the Israelite period, as if it was known to be a place of significant religious opposition that was intentionally buried and avoided. This has an interesting parallel in the narrative of the destruction of Ai, in which the Israelites buried the king of Ai at the city gate under a huge pile of stones (Joshua 8:29). The broken standing stones, while not conclusive, also fit the profile of Israelites commanded in the Law of Moses to destroy these particular religious objects (Deuteronomy 7:5). Therefore, this temple or sacred area may have been in use until it was intentionally destroyed and buried under a large heap of stones in about 1400 BC when the city appears to have been abandoned. If the occupational evidence at Khirbet et-Tell truly shows that the city was occupied in the Middle and Late Bronze Ages until an abandonment around 1400 BC, including the destruction and burial of a temple, then the site matches the geographical, chronological and historical specific data describing the city of Ai in the books of Genesis and Joshua. ◆

PHOTO: TITUS KENNEDY



PROOF OF AGE: These examples of pottery—a double-handled juglet (left), appearing to be from the Middle Bronze Age, and a Pyxis with shoulder (right) from the Late Bronze Age—were discovered in Khirbet et-Tell, casting doubt on the belief that the site was unoccupied during these periods.

1400 BC *Traditional biblical dating indicates Joshua destroyed Ai just before 1400 BC.*

MIDDLE BRONZE AGE

LATE BRONZE AGE

2000 BC

1000 BC

2400 – 1220 BC *Callaway believes Khirbet et-Tell was completely abandoned during this period despite discovering material from the Middle and Late Bronze Ages.*

1220–1050 BC *Evidence of a small unwalled village at the location of Khirbet et-Tell.*

Xerxes' Greek Campaign

The clash of cultures—Greece vs Persia—was inevitable. But the outcome was less predictable. **Richard Stone** looks at the why, the how and the wherefore of Xerxes' march on Athens and Sparta.

WITH HIS DEATH IN 465 BC, DARIUS THE Great's desire to see the subjugation of the Athenian state obviously remained unfulfilled. It was left to Xerxes the First, Darius's son, to instigate a renewed attack against the Greek homeland. There are accounts, however, which suggest that the conquest of Greece was not foremost in his mind when Xerxes first ascended the throne. Indeed, his initial focus was on quelling insurrection, first at Babylon, as well as in Egypt. These matters would not be resolved until 485 BC.

Even so, a renewed attack on Greece was no certain thing. Xerxes shared much of his father's astuteness and intelligence, qualities that informed him that there was little to be gained from another invasion of Greece. However, Mardonius, Commander in Chief of the Persian army, wanted the battle renewed; he was the primary agitator for a Greek campaign. There were, however, older and wiser heads, particularly Artabanus, Xerxes' uncle and brother of Darius, who counselled strongly against such a venture, reminding Xerxes of his father's catastrophic crusade.

Mardonius, however, directed Xerxes' attention toward the paucity of the Greeks' materiel resources and to the running sore, politically speaking, which was the perception of Athenian treachery (see previous article on Darius in November/December 2015 issue). Quoting Mardonius's speech to Xerxes, Herodotus has him saying of the Greeks:

> *"It would indeed be a fearsome thing if we who have defeated and enslaved the Sacae, Indians, Ethiopians, Assyrians, and many other great nations who did us no injury, but merely to extend the boundaries of our empire, should fail now to punish the Greeks who have been guilty of injuring us without provocation. Have we anything to fear from them? The size of their army? Their wealth? The question is absurd; we know how they fight; we know how slender their resources are. People of their race we have already reduced to subjection—I mean the Greeks of Asia, Ionians, Aeolians, and Dorians. I myself have some experience of these men . . . . I got as far as Macedonia—indeed, almost to Athens itself—without a single soldier daring to oppose me." (Herodotus,* Histories *7.9)*

In the end, the arguments of Mardonius prevailed. Yet along with the desire to exact retribution against the Athenians, it is quite possible that self-interest also entered the equation. Mardonius was supported by a group of exiled Greeks eager to see revenge wreaked upon their homeland and who possibly also saw a role for themselves in a future Greece under Persian rule. For his part, Mardonius saw himself becoming Satrap over the whole of Greece in the wake of victory.

For his protestation, Artabanus was accused of cowardice, and it was only the fact of his family ties to Xerxes that saved him from the consequences of his forthright opposition to the invasion. A subsequent (and convenient) vision enabled Artabanus to admit that he'd been wrong, and thus be readmitted into the king's good graces.

MASSIVE PREPARATIONS

Still, the invasion was not a decision Xerxes took lightly; nor did he do things by halves. He knew from his father's experience that any victory would only ever be hard won. He spent the next four years conscripting soldiers from the four corners of his kingdom, amassing supplies and producing armaments. By the end of the build-up he had assembled a huge army and massive fleet. While Herodotus's figures of five million men and four thousand vessels are perhaps hyperbole, undoubtedly it could have been the largest military force ever to have marched into battle. Says Herodotus,

PHOTO: GARY WEBSTER

RELIEF OF XERXES I, PERSEPOLIS, IRAN. Xerxes I was the son of Darius I and husband of the biblical Queen Esther.

THE NAQSH-E ROSTAM TOMB COMPLEX OF THE ACHAEMENID KINGS, near Shiraz, Iran. On the far right is the tomb believed to be that of Xerxes I, second from the right is that of his father, Darius I, and third from the right, that of Artaxerxes I.

> *Some nations provided ships, others formed infantry units; from some cavalry was requisitioned, from others horse-transports and crews; from others, again, triremes for floating bridges, or provisions and naval craft of various kinds. (Herodotus 7.21)*

By modern estimates, it was a force of one-third of a million warriors.

Xerxes obviously expected news of his vast army to reach the ears of the Greeks in Europe. The Asian territories through which he marched were, after all, home to many Greeks who had come under Persian jurisdiction and were capable of communicating with friends and relatives in their former homeland. Herodotus tells us that Xerxes' first task upon reaching Sardis was to send representatives to every Greek city-state—except Athens and Sparta—demanding earth and water as a sign of their subservience to Persia, and to prepare entertainment for him when he arrived with his forces. Clearly he expected he would have little opposition from the cowed Greek cities that lay along his path to Athens.

To some extent this ploy was successful; when it came to the Greek resistance it was left to just 31 states, mainly in central and southern Greece, to meet and halt the invasion. Sparta, because it had the most effective military, was elected to lead the defence. The confederation also sought the assistance of Syracuse, the most powerful Greek city-state on Sicily; however they themselves were dealing with an attack from Carthage, in what may have been a campaign the Carthaginians had purposely coordinated with the Persian attack.

At Abydos, which today lies on the stretch of water we know today as the Dardanelles, where Anzac, French and British forces were to fight the Turks some 2500 years later, the Persians intended to cross the Hellespont from Asia to Europe by means of pontoon bridges. However, these were destroyed by a storm before they could be deployed. They were rebuilt, one with 360 triremes and penteconters (a smaller vessel) lashed together to form a new bridge, with another 314 vessels used to complete a second. Anchors were used to counter the winds that slammed the channel. Planks were laid over to form the thoroughfare, with brushwood overlaid. Soil was packed down to form a road surface. Paling fences lined both sides of the pontoon bridges to prevent horses and mules from taking fright.

Herodotus also records that many kilometres further north, Xerxes had a canal cut across the peninsular at Mt Athos in Northern Greece, across the Isthmus of Actium. It was a project three years in the making, the canal being some 2 km (1.5 miles) in length. With memories of the destruction wrought on the fleet when they last sailed around the peninsular, this canal was intended to give safe passage to the Persian vessels into the Aegean off the coast of Greece. For years, historians doubted that the canal had been completed, or even gotten past the earliest stages of construction, given the hard, rocky nature of the plateau where it was said to have been dug. Of more recent time, however, Herodotus's account has been vindicated, as several metres below the surface geologists have detected something of a canal structure. Dr Ben Isserlin, an archaeologist from Leeds University, and Dr Richard Jones of Glasgow University, both have led work on the project, using seismic technology generally deployed for oil exploration. The canal's width appears to span approximately 30 metres (100 ft), wide enough to accommodate two triremes side by side, with its banks sloped inwards as they reached a depth of 15 metres (50 ft).

After wintering in Sardis with his forces, Xerxes received the news that the canal at Mt Athos had been completed,

PHOTO: GARY WEBSTER

SARDIS, TURKEY. When Xerxes reached Sardis, enroute to fight the Greeks, he sent representatives to every Greek city-state, except Athens and Sparta, demanding "earth" and "water" as a sign of their subservience to his Persian rule.

so he marched to Abydos. An omen in the sky along the way predicted victory, cheering Xerxes' spirits. The lead elements of his force carried the materiel on pack animals; these were followed by troops made up of a mix of nationalities. At around the mid-point of his column a thousand horsemen and an equal number of spearmen kept close attendance to King Xerxes himself. Ten large, sacred horses immediately preceded him, as did the chariot of Zeus drawn by eight horses, while the king's chariot, drawn by the large Nisaean horses, followed that. Another thousand spearmen marched in his train, also with another thousand cavalry. These, in turn, were followed by 10,000 infantry and then, reputedly, 10,000 Persian horses. After a gap of two furlongs, the rest of his massed army marched.

CROSSING THE HELLESPONT

After the appropriate ceremonies, the crossing began. Herodotus tells us that they took a full week to transit from Asian to European soil. Once across, the fleet followed the coast to Cape Sarpedon while the army marched in concert. At the Persian garrison of Doriscus, he reorganised his troops and had his fleet brought ashore at an adjoining beach to dry out their planks. From this point, the army marched in detachments up the coast and across the top of the Aegean. The fleet followed the coast as well, and then was dispatched to sail through the Athos canal and to wait for the army in the sheltered waters of Therma (later known as Thessalonica).

At the outset, the Persian forces experienced little opposition. Many northern Greek city-states, as well as some in central Greece, quickly capitulated to the invading force. Their sparse and scattered populations made resistance futile in any case—and anyway, the Greeks remembered that the Persians had a reputation for treating their conquered peoples well. In addition, the Boeotian city-state of Thebes, which had long been at loggerheads with Athens and was located just 70 km (45 miles) north of the Athenian capital, supported the Persian advance in the hope of gaining both political and material advantage once a Persian victory was assured.

THE STAND OF THE "300"

Xerxes' army took an inland route, which brought them to the coast at Thermopylae. This is where the Greeks would finally mount a resistance. Thermopylae, however, was only the second choice for the Greek defence. The first had been the Valley of Tempe to where a force of 10,000 hoplites had been dispatched, but from which were subsequently withdrawn when they realised the size of the Persian force and the vulnerability of their position. When the situation reached crisis point, it was determined that they would defend the pass at Thermopylae. The Greeks dispatched a force of 7000 warriors—the number being limited by the inevitable politicking between the city-states, as well as prevailing religious festivals, which curtailed military activities. But 300 of the defenders were the famed Spartans, the only professional Greek soldiers present and the ones soon to be etched with glory.

Some 150 km (95 miles) north of Athens, Thermopylae was a good place for the stand. It was a narrow, somewhat enclosed defile bordered by sea marshes to one side and sheer cliffs on the other, and surrounded by virtually unassailable mountains. The Greek forces under the leadership of Leonidas were the cork in the bottle, designed to prevent the Persian horde from advancing further. For four days the Persians were stalled, during which time Xerxes sent envoys asking the Greeks to lay down their

PHOTO: GARY WEBSTER

LEONIDAS MONUMENT. Leonides' sacrifice along with his 300 comrades has become a timeless symbol. In Thermopylae where Leonidas and his comrades died, ancient Greeks erected a stone lion memorial. Nothing of the original monument survives today, but in 1955, sculptor Vasos Falireas erected this modern monument depicting battle scenes at the site.

arms to prevent bloodshed. Leonidas's reply famously was, "Come and get them!"

After the failure of the initial attacks by Xerxes' Median and Kissian forces, he dispatched his élite Immortals, who also failed to dislodge the Greeks. Close-quarter fighting was something at which the Greeks excelled and for which they were well-equipped (see previous article on the Battle of Marathon). The Greeks were also smart strategically, feigning a disorganised retreat before turning on their pursuers with a rehearsed tight phalanx formation that was virtually impenetrable.

On the second day, things went no better for the Persian forces—at least until a local Greek shepherd betrayed his countrymen by apprising the Persians of a track around the pass, so that they could attack from both the front and rear simultaneously. Phokian troops had been stationed at the pass to protect the Greek rear. However, these troops retreated to a defensive position when they saw the Persians advancing, so that the encircling forces were able to bypass and get behind the main Greek contingent below. When Leonidas saw that the whole of his force was threatened with annihilation, he ordered the bulk of his army to retreat, leaving 300 Spartans as a rear-guard, along with 700 Thespians and 400 Thebans, the latter held there much against their will.

On the third day, the Persian frontal attack was joined by the forces assembled at the Greek rear, as the king's Immortals again entered the fray. The fighting was fierce. Leonidas was killed and his remaining force decimated by arrows, except the Thebans who may have surrendered. With the Greek heroes slain, Leonidas suffered the indignity of having his head impaled on a stake at the site of the battle. It was a barbarous act by Persian standards, perhaps spurred by the fact that two of Xerxes' step-brothers fell before the victory was achieved.

FIRST NAVAL ENCOUNTER

While all this was happening, off the coast of Artemisium, about 90 kilometres away, a fleet of Greek triremes were arrayed to intercept the Persian fleet should it attempt to sail down the sheltered coast of Boeotia. And just as Leonidas's task was to stop the Persian army, the Greek fleet was to deny the Persian armada access to the straights of Euripus, which offered a sheltered passage of water in the lee of the island of Euboea. Around 270 Greek vessels under the admiralship of Themistocles had arrived at Artemisium to find the Persian fleet a scant 15 km (9.3 miles) away at Aphetae. The Persians had already lost a third of their triremes—not the most seaworthy of vessels—with heavy loss of life in a storm and accompanying heavy seas. But approximately 800 ships remained. With news of the Greeks' arrival, the Persian admiral dispatched 200 triremes down the weather coast of Euboea to come up the narrows between the island and the mainland, so that the Persians could again attack from two directions.

The Greeks were forewarned of this strategy by a defector from the Persian ranks and prepared to meet the southern encircling force. When it failed to materialise they decided

PHOTO: DOLLAR PHOTO CLUB

to attack the main Persian contingent. The larger Persian fleet with their more agile ships encircled the Greeks, who formed a closed circle, their bows pointing outwards toward the foe. By the end of battle, in the coming dark, the Greeks had taken 30 Persian ships and some important captives. Both fleets retreated. The thunderstorm that came that night was a bad omen for the Persians, as was the sight of corpses and the detritus of battle which had washed towards their moorings, further unnerving the invaders. Then, unfortunately for the Persians, those vessels dispatched to circle Euboea had been driven onto rocks and sank in heavy seas.

The Persians were in recovery mode the following day: in no mood for another premature engagement. The Greeks, however, buoyed by the arrival of 53 triremes from Athens and news of the fate of the encircling Persian force, sailed out to destroy a small deployment of Persian vessels.

On the third day, the Persian fleet put to sea around midday, and approached the Greek fleet in a crescent formation meant to encircle their enemy. The press of ships meant that the oars of the Persian vessels fouled those of their neighbours, so forcing home their superior weight of numbers was difficult. The losses on both sides were heavy, and both fleets retreated again to lick their wounds. The Greeks then planned a strategic withdrawal, and did so without delay when news of the fate of Leonidas and his men reached them later that same day. The fleet sailed past Athens into the straights between Salamis and the mainland, the thinking being that the confined waters would make it again impossible for the Persian fleet to bring their superior strength to bear.

THE PERSIANS MARCH

In the meantime Xerxes and his army took their leave of Thermopylae: the Persians hailed as victors as they marched, greeted by many of the local populace as friends (it was politic to do so). The main exception were the Phocians, a city-state that had sent troops to serve under Leonidas at Thermopylae. They were betrayed to the Persians by the Thessalians who acted as guides to help the invading force track down Greek loyalists. Phocian territory was overrun; their towns razed, many of their men cut down and the captured women were raped.

FALL OF ATHENS

The Athenians had expected that the Peloponnesian armies would make a stand in Boeotia, inhabited by Greeks who sided with the Persians against the Athenians, to the north-west of their capital. Such a stand would provide, if nothing else, the opportunity for the Athenians to evacuate their women and children from their capital. In this they were to be sorely disappointed. The Peloponnesians had given up all hope of holding any of the main area of Greece and were now focused on defending their own territory, building a defensive line at the isthmus which linked the Peloponnesian territories with the rest of Greece, near where the Corinthian channel runs today. This meant that Athens could not be defended. However, rather than capitulate, the city of Athens was evacuated. As well as evacuating the women, children, the infirm and the old, so too the men of fighting age left, leaving no force to defend the city. The whole population streamed out of Athens—upwards of 50,000—and headed for the north-east Peloponnesian coast.

Finding Athens deserted, in an uncharacteristic violent action, Xerxes sacked Athens, setting it to the torch. It was an action he almost immediately regretted, yet it was a measure that showed the Persian antipathy towards Athens and exposed the full measure of the sense of betrayal that Xerxes felt on his father's behalf, the perception of Athenian treachery of all those years before.

ENGAGEMENT AT SALAMIS

Just over a week later, the Greek fleet, anchored off the western coast of Attica, would be the key to Greek survival as a free homeland. The sacking of Athens may have steeled Athenian resolve, but their commander, the Athenian admiral Themistocles, was facing a crumbling resolve on the part of his Peloponnesian allies. These Greeks, perhaps quite reasonably, sought to retreat to their home territories taking with them their fleets to defend their homelands to the last. However, Themistocles saw the dangers of facing a numerically superior Persian fleet on the open sea. If the Greek fleet was spread out along the Peloponnesian coast in open waters, they could be devoured piecemeal. The unity of the Greek force was under such threat that Themistocles employed a brilliant deception. Before those elements of the Greek fleet that were wavering could break off and head out into open water, he dispatched an agent provocateur to the Persian forces to encourage them to close off the ends of the straights to prevent the disaffected Greek elements of the naval force from sailing away. The Persians obliged, not realising that they had played right into the enemy commander's hands.

If the Greek forces were to prevail, they would have to adopt a similar tactic to the Spartans at Thermopylae, and indeed as had the fleet at Artemisium, to fight the Persian fleet in the confined waters between the mainland and the island of Salamis, where the Persians couldn't bring the full force of their fleet to bear and where their superior manoeuvrability was compromised. There would be no room for anything but a grinding, close-quarter battle. Here the heavier Greek ships would bear down on the smaller Persian craft, their more massive forward underwater rams more effective at smashing the frailer, opposing vessels.

Athens had been building ships since 483 BC, for just such a time as this. Theirs was the largest contingent of the taskforce, its numbers expanded by Themistocles' call for a fleet to protect the Athenian homeland from Persian designs. The bulk of the fleet were triremes, named for the three tiers of oarsmen, 170-strong, which propelled their vessels into battle. Usually ten hoplites with their spears, swords and shields, as well as four archers, occupied the upper deck preparatory to close-quarters battle. Officers and other crew added another 16 sailors to the complement. The Greek ships were large in comparison to the Persian vessels, yet they were cramped and without any accommodation for the crew. They were also unstable and were therefore pulled ashore at night to prevent them

LEONIDAS I OF SPARTA. Leonidas was leader of the Greek forces at the Battle of Thermopylae.

THERMISTOCLES, COMMANDER OF THE GREEK NAVY, who defeated the Persians in the Battle of Salamis.

getting into difficulties should the sea come up after the crew disembarked, explaining the ready loss of vessels during storms.

As sound as their battle plans may have been, the structure of the triremes meant that the crew were placed in a precarious position. Most oarsmen could not see out of the oar ports, so while the battle raged around them they had no appreciation, other than their own psychological fears, of what fate was about to befall them. In the heat of battle, it was not uncommon for the ranks below to suffer the indignities of the loosened bowels of the rowers above. So sound discipline was the key to success in such situations, something the Greeks possessed in abundance.

The Persians were beaten. Resoundingly. It is even possible that some of the Ionian ships in the Persian fleet held back from fully committing their forces because of the Greek heritage and secret sympathy they shared with their erstwhile homeland. The toll on the Persian forces was devastating. The crews of the sinking Persian ships, unable to swim, drowned. Greek survivors, however, were able to swim to friendly shores to fight again another day.

AN INGLORIOUS RETREAT

Since Xerxes no longer had a fleet that could transport materiel to support his invasion, he retreated to Asia, his army living off the land as they passed, sometimes reduced to eating grass, bark and leaves when nothing else was available. Many of his troops suffered disease and dysentery, falling by the way, too sick to keep marching, many dying by the roadside. To add insult to injury, the bridges across the Hellespont had been destroyed by storms so they had to be laboriously ferried across by ship.

MARDONIUS'S FATEFUL LAST CAMPAIGN

However, Xerxes had left a vast land force in Greece—Herodotus put the number at 300,000—under General Mardonius, provisioned by the Greek states which supported the Persian campaign against Athens and the Peloponnesian states. The following year, in 479 BC, Xerxes offered Athens a peace treaty, but one which only applied to Athens, not the rest of the hostile city-states. He would even finance the rebuilding of Athens and give them new territories as recompense for what they had suffered at the hands of his army. On the face of it, the gesture was as magnanimous as the one his father had shown the Ionians in the wake of their rebellion all those years before. But it also heralded a bold strategy: with Athens as his ally, Xerxes could dominate the rest of Greece.

The Spartans, in particular, were alarmed by the implications of such a treaty on their security. In the end, however, the Athenians refused the offer. Perhaps they remembered the sacking of their city by the Persians. Perhaps they realised that once the rest of Greece had fallen into Persian hands they themselves would be isolated and fall under Persian dominion as well. Perhaps it was simply that they were Greek, and would not betray their own. Certainly,

PHOTOS: PRAXINOA WIKIPEDIA | UNTOURENGRECE—WIKIPEDIA

RECONSTRUCTED GREEK TRIREME. These boats were so named for their three rows of oarsmen. The heavier Greek ships, with their massive, forward underwater rams, could bear down on the smaller, more frail Persian ships, smashing them, winning victories that severely tempered the Persian successes on land.

these were the mix of reasons for rejecting the Persian offer. If anything, the Athenians sought retribution for the destruction of Athens, not recompense, telling the unoccupied city-states, their allies:

> *"We all share the same ancestry and language; we have sanctuaries and sacrifices to the gods that we share, and we share a common way of life." (Herodotus,* The Histories *8.144)*

A SECOND ATHENS SACKING

As a consequence, the Persian army marched into Attica to threaten Athens again. The city was evacuated and then destroyed a second time, and the surrounding countryside laid waste. The Spartans marched north to join the battle, not because of any altruistic impulses but because if they did not the Athenians threatened that they still could accept the offer of an alliance with the Persians!

The Greek and Persian forces met on the plains of Boeotia, just north of Athens. It would be the last great land battle of the era. The Persian force was, as always, overwhelming. The Spartans took the centre line and, again, the Greeks won a tremendous victory! Once the Persian leader Mardonius fell in battle, his forces were routed. It was called the Battle of Plataea. If this weren't enough, the Greek fleet off Anatolia caught the Persian fleet unawares, disembarking to fight the Persians on shore and producing a rout of the Persian forces. This was the Battle of Mycale, and fought on the same day as the land battle in Europe. This one day, then, practically brought an end to Persian designs on Greek territory. Persia remained the great empire it was, but they had other concerns, including insurrections within their existing territories to attend to; they had no taste for more Greek determination or Greek steel.

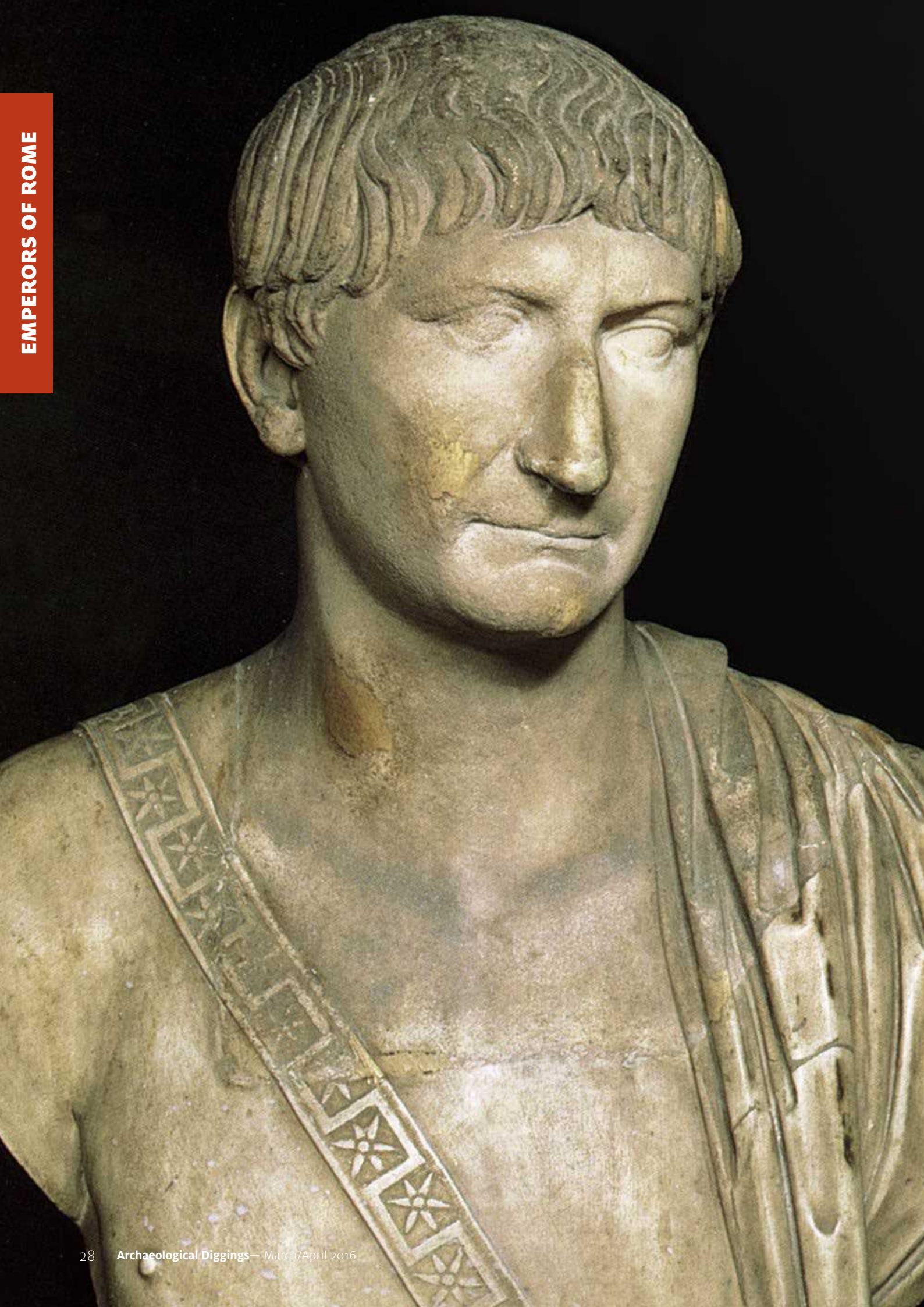
GREEK STRENGTH

There were a number of factors that contributed to the Greek dominance in their encounters with the Persians: superior tactics played a part, as well as superior weaponry and armour. There was also the "home-game" advantage, which enabled them to pick the most advantageous places to fight their battles. But what proved of most importance in the end, in spite of the disagreements and the vacillation on the part of some of the confederates, was that the coalition of 31 city-states held. And, as you might expect from a nation that would introduce democracy to the world, its people, of all ranks, joined in the common cause. It was a coalition of citizens which cut across all delineations of wealth or status to defeat a common enemy.

XERXES' END

Little is known of Xerxes' final years. However, it appears that he withdrew further and further from public life, involving himself in, or perhaps defending himself from, internal palace intrigues. In 465 BC he was assassinated; the result of a plot by some of those ministers who were closest to the throne. Xerxes' death was therefore more ignominious than his father's; however, their respective Greek adventures cast the same shadow over their days. With the rule of Xerxes over, Artaxerxes I, Xerxes' youngest son, ruled, but the Achaemenid Dynasty was approaching its end. Hostilities between the Achaemenians and Athens sputtered to an end by 448 BC during Artaxerxes' rule; however these later conflicts never approached the scale of the first two campaigns and never again threatened the sovereignty of Greece. ◆

PHOTO: TEMPLAR52—WIKIPEDIA



TRAJAN

Emperor of a Military Machine

The military was his life, and military success was his road to emperorship. And under Trajan's generalship, the Roman empire was to reach its greatest eastern extent, as **Daryn Graham** explains.

THE RULER OF THE EMPIRE STOOD ON THE SHORE OF WHAT IS now known as Kuwait, on the Persian Gulf. No emperor before him had ventured so far east as had he and, as it turned out, none after. As he stood looking across the shimmering water that day, he spotted a ship setting sail for India. "I should certainly have crossed over to India," he mused, thinking of Alexander the Great's military exploits some centuries before which took him to north-west India, adding, "if I were still young." The year was AD 116 and the emperor was Trajan.

Trajan was the son of a successful Roman general who had served under Titus in the First Jewish War (AD 66–70). His father had been publicly honoured by Emperor Vespasian for his victories against the mighty Parthians whose empire blocked the way to the Indus River. His was an élite military-geared family from Italica, Spain.

Such a family background developed in Trajan a love for the military life. He thrived in whichever Roman army he served, rising quickly to legionary commander. Trajan travelled vast distances around the empire, playing the part of both a warrior for Rome and a curious tourist, serving in Spain, Gaul, Germany and even Syria.

Trajan's obvious talents as an army commander were rewarded when in AD 96, the then new emperor, Nerva, appointed him governor of Upper Germany. That appointment was to prove beneficial for both Nerva and Trajan, as Nerva, by then an old man, was hated by the Praetorian Guard in Rome, and needed the military to remain emperor, indeed, to remain alive! Trajan, as governor of Upper Germany, had four legions under his command, and proved the perfect ally for Nerva. But support came at a price: Trajan would support Nerva on condition he be adopted by the emperor as his son and thus heir. Nerva

PHOTO: INTERFOTO—ALAMY STOCK PHOTO

SECOND CENTURY MARBLE BUST OF EMPEROR TRAJAN on display in the Vatican Museum. Trajan ruled from AD 98 to 117, when he fell ill and died. Under his leadership the Roman Empire was expanded to its farthest boundaries.

ROME UNDER TRAJAN

Trajan was not even a native Roman, being born in Spain. However, as the son of a loyal and successful Roman general, he understood that Romans loved glory, and what better way to give it to them than military success. And this was his route to the Roman emperorship and ongoing successful rule.

(Modern borders shown)

agreed, so when Nerva died of old age at the end of a short reign in AD 98, Trajan became emperor.

Power in the Roman Empire was always in the hands of those who controlled the strongest army. So after Nerva died, Trajan made a strategic effort to secure the goodwill and allegiance of the armies. He toured the armies of Germany and those on the northern Danube River frontier.

It is clear that he aimed to be leader of the armies as emperor. Shortly after receiving news of Nerva's death, Trajan handed his sword to an army prefect in front of his men, saying, "Take this sword, in order that, if I rule well, you may use it for me, but if ill, against me" *(Cassius Dio,* 68. 16. 1).

In order to build loyalty within the army and to realise his dream of equalling the feats of his hero Alexander the Great, Trajan sought out an enemy. In AD 100, that enemy presented in Decebalus, king of the Dacians, to the north of the Danube River.

But Decebalus proved himself a difficult opponent. When Trajan declared war, Decebalus deployed special service troops to infiltrate the Roman military camps with a view to assassinating the emperor. Then Decebalus captured one of Trajan's generals, Longinus, with the aim of leveraging his life, forcing Rome's armies out of Dacia. But each of those schemes came to naught. The plot to assassinate Trajan was foiled, and Longinus committed suicide by poison, preferring to save the Roman cause than his own skin.

The armies of Trajan and Decebalus fought each other almost to elimination, but eventually Rome's legions prevailed, being better equipped and better trained. Decebalus took his own life rather than fall into Trajan's hands.

From that time, Dacia became a Roman province, and when Trajan returned to Rome victorious, lavish celebrations ran for 123 days, during which 10,000 gladiators fought and 11,000 animals were slain before cheering Roman crowds in arenas like the Colosseum.

The Dacian campaign was arguably Trajan's greatest military achievement. And during the celebrations, ambassadors arrived in Rome from as far away as India. Trajan commemorated it himself, constructing Trajan's Column, a tall column with pictorial depictions of the Dacian War spiralling upwards around it, which is still standing in Rome today.

But Trajan was not one to rest on his laurels. By AD 106 he had ordered Palma, the governor of Syria, to subdue the Nabatean kingdom of Arabia, whose capital was the iconic city of Petra. Palma successfully prosecuted this order and Arabia became the newest Roman province.

For years Trajan had dreamed of emulating the exploits of Alexander the Great, the Macedonian king who, in the fourth century BC, built an empire from Greece to Egypt, then Babylonia, Persia and, finally, India. So when the Parthians seized Armenia, which served as a buffer-state between the Roman and Parthian empires, Trajan saw a chance to play conqueror and, in AD 115, as Alexander had done, he marched east.

Armenia, Mesopotamia, Assyria and Babylonia quickly fell to Trajan's legions. The Parthian king of kings, so-called, fled east before Trajan's approach, across the

TRAJAN'S COLUMN (left) is one of the most distinctive monumental sculptures to have survived the fall of Rome. Carved into the structure are 2662 figures in 155 scenes depicting Rome's victory over Dacia, similar to a modern-day comic strip. The hero Trajan appears in 58 scenes. Viewers were meant to follow the story from bottom to top, standing in one place rather than circling the column 23 times, as does the frieze. Studies of the column using X-ray technology have revealed the whole Trajan's Column was once colourfully painted.

DECEBALUS, KING OF THE DACIANS (above) A scene from Trajan's column depicting Decebalus, the Dacian king, committing suicide to avoid capture. The carvings give a visual history of the two wars, with Trajan as the hero and Decebalus as his worthy opponent.

PHOTOS: WIKIPEDIA | VLADIMIR MUCIBABIC—DREAMSTIME.COM

Zagros Mountains where he planned to build an army to deploy against Trajan in a counter-attack when the opportunity arose.

He didn't have long to wait. In AD 116, as Trajan surveyed the Persian Gulf musing about India, news came of a revolt by the nations of Armenia, Mesopotamia, Assyria and Babylonia. Soon after came more bad news. This time that the Jews of Egypt, Cyrene and Cyprus had also rebelled, killing tens of thousands of Romans and Greeks in revenge for the destruction of their temple in Jerusalem in AD 70.

Trajan had no choice but to retreat to the safety of Syria, along the west side of the Euphrates River, where the Parthian cavalry attacked. The swift-moving cavalry was well-suited to the open terrain of the Euphrates tributary, and many of Trajan's slow-moving legionaries were cut down as they retreated. Trajan then fell sick, and from Syria, in advance of his army, headed to Rome for medical treatment. But he never made it and soon after arriving in Selinus in Cilicia, Trajan succumbed to the illness and died in 117.

Nonetheless, Trajan was memorialised by Romans. At the height of his success in the east, in AD 116, the Roman Senate conferred on Trajan the title *Optimus Princeps,* or "Best of the Emperors." And even after his death a fondness remained. When news of Trajan's passing arrived in Rome, Trajan was promoted to god status, and a posthumous triumphal procession through the streets of Rome was

TRAJAN'S MARKET. Dacia (today's Romania) was rich in gold and silver and with the Roman victory over the country, Emperor Trajan used these newly acquired resources to finance a major expansion of the Roman Forum, including this covered hall market. It represents the ancient equivalent of the modern shopping mall, housing no less than 150 shops and offices.

celebrated in honour of his accomplishments, past—and future, had he had only just lived a few more years. When Trajan's body arrived in Rome, it was interred with great ceremony and mourning beneath his prized column.

Trajan's success as emperor was in that he gave the Romans what they most desired: military successes and glory. He had taken Roman arms further than any emperor before, even surpassing the conquests of Alexander the Great, for from his beginnings in Spain to his march through Parthia to the Persian Gulf, he traversed and suppressed more lands over greater distances than had Alexander.

Trajan was also a more prolific writer than Alexander. In fact, many correspondent letters between Trajan and Pliny the Younger—the same Pliny the Younger who wrote an eye-witness account of the AD 79 eruption of Mount Vesuvius—still exist. From these letters we gain insight into Trajan the ruler and Trajan the thinker.

Many of these correspondences were written when Pliny was governor of Bithynia, in modern-day Turkey, in AD 110, and in some mention is made of the Christians living in that region. In one, Pliny writes to Trajan for advice on what to do about the Christians there, for, as he complains, "the temples" there "had been almost deserted for a long time" on account of the growing numbers of Christians. The letter also outlines the form of worship carried out by the Christians in Bithynia, which had been discovered in investigations by Pliny's staff. It is the earliest non-Christian account of the early church at worship in existence. It reads:

> *. . . they had met regularly before dawn on a fixed day to chant alternately amongst themselves in honour of Christ as if to a god, and also to bind themselves by oath, not for any criminal purpose, but to abstain from theft, robbery, and adultery, to commit no breach of trust and not to deny a deposit when called upon to restore it. After this ceremony it had been their custom to disperse and reassemble later to take food of an ordinary, harmless kind.* (Letters *10. 96)*

Trajan's response to Pliny is diplomatic. He writes that the Christians living in Bithynia "must not be hunted out," but that punishments for being a Christian and rewards for praying to the Roman gods should be put in place *(Letters* 10. 97). Such a reply might seem harsh today, but the world in which Trajan lived was an extremely violent one.

But for all his greatness, upon his death, the empire of Trajan turned into total turmoil. His adopted heir, Hadrian, had been left far behind in the East to lead what remained of Rome's retreat to the safety of Roman Syria, hardly an auspicious beginning for Hadrian.

And how Hadrian recovered from this dire situation will be answered in the next issue. ◆

PHOTO: DOLLARPHOTOCLUB.COM | BOGGY—DREAMSTIME.COM

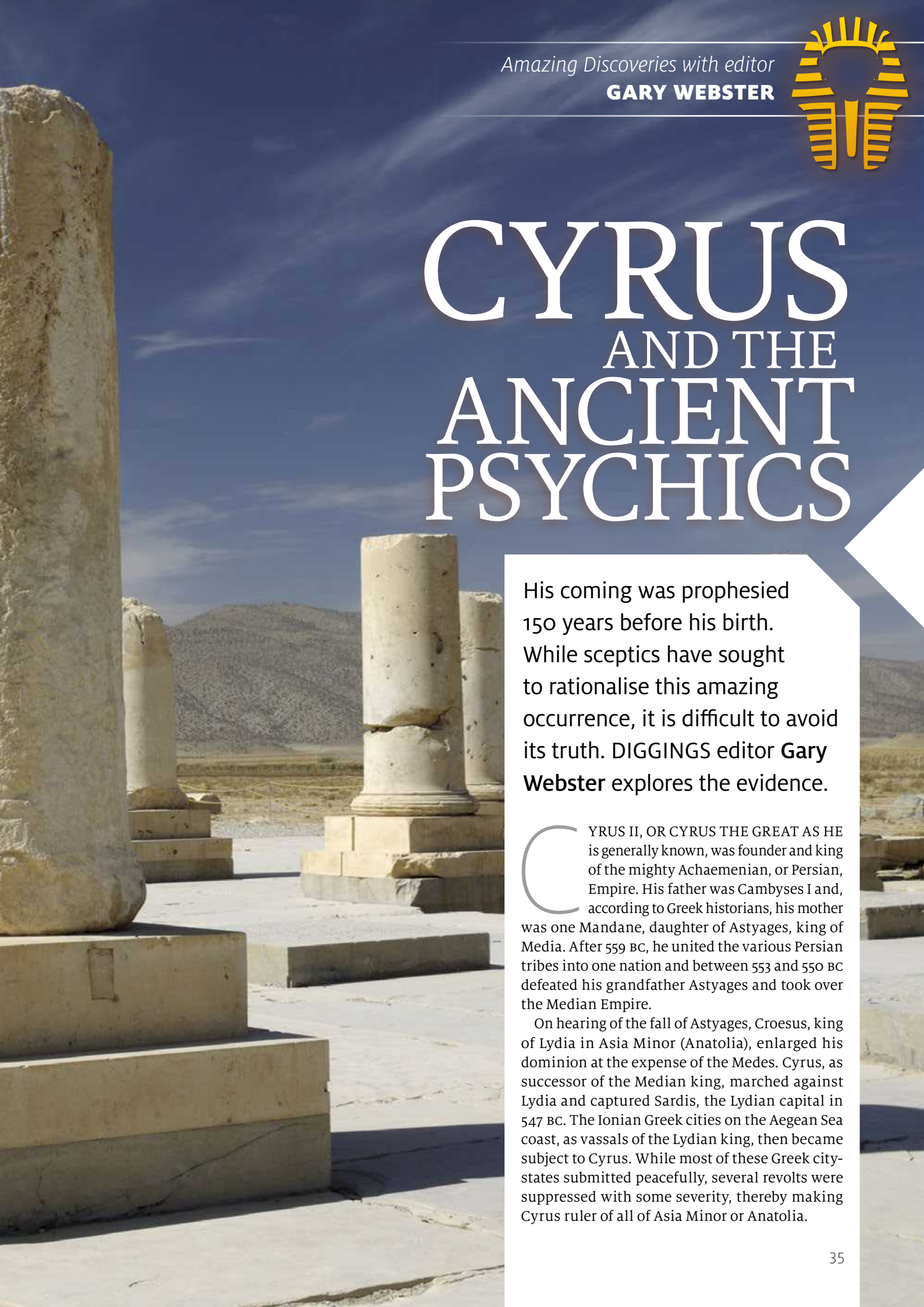
DETAIL OF TRAJAN'S COLUMN. The column emphasises Rome's vast empire depicting an army made up of not only professional soldiers but also conscripts and mercenaries from across the empire, including African cavalrymen with dreadlocks, Iberians slinging stones, Levantine archers wearing pointy helmets and bare-chested Germans in pants. Archaeologists have used these images to learn about the uniforms, weapons, equipment and tactics of Trajan's army.

Video

Tap here to watch a stop-motion animation of one theory on how the column was built. *Active internet connection required.*

PHOTO: TUNART—ISTOCKPHOTO.COM

RUINS OF PASARGADAE. Before Cyrus's rise to fame the Persians were nomadic shepherds with no real architectural traditions of stone. With the wealth achieved from the expansion of Persia, Cyrus constructed the royal city of Pasargadae, the first city in the Achaemenian style.



CYRUS AND THE ANCIENT PSYCHICS

His coming was prophesied 150 years before his birth. While sceptics have sought to rationalise this amazing occurrence, it is difficult to avoid its truth. DIGGINGS editor **Gary Webster** explores the evidence.

CYRUS II, OR CYRUS THE GREAT AS HE is generally known, was founder and king of the mighty Achaemenian, or Persian, Empire. His father was Cambyses I and, according to Greek historians, his mother was one Mandane, daughter of Astyages, king of Media. After 559 BC, he united the various Persian tribes into one nation and between 553 and 550 BC defeated his grandfather Astyages and took over the Median Empire.

On hearing of the fall of Astyages, Croesus, king of Lydia in Asia Minor (Anatolia), enlarged his dominion at the expense of the Medes. Cyrus, as successor of the Median king, marched against Lydia and captured Sardis, the Lydian capital in 547 BC. The Ionian Greek cities on the Aegean Sea coast, as vassals of the Lydian king, then became subject to Cyrus. While most of these Greek city-states submitted peacefully, several revolts were suppressed with some severity, thereby making Cyrus ruler of all of Asia Minor or Anatolia.

Cyrus next turned to the Babylonian empire. Dissatisfaction of the people with their ruler, Nabonidus, gave Cyrus a pretext for an invasion. The conquest was quick, for even the priests of Marduk had become estranged from Nabonidus. Babylon, the greatest city of the ancient world, fell without a real battle to the Persians in October 539 BC.

Cyrus had several "capitals." One was the city of Ecbatana (modern Hamadan), the former capital of the Medes, and another was the new capital of the empire, at Pasargadae in Persia. It was said to have been built on the site of Cyrus's defeat of Astyages, but there are few ruins of Pasargadae to see today. Cyrus also kept Babylon as his winter capital.

Cyrus not only conciliated the Medes, but united them with the Persians in a kind of dual monarchy of the Medes and Persians—Medo-Persia. He borrowed the traditions of kingship from the Medes, who had ruled an empire when the Persians were merely their vassals. A Mede was probably an adviser to the Achaemenian king, a sort of chief minister. Reliefs at Persepolis, a capital of the Achaemenian kings from the time of Darius, frequently depict a Mede together with the king. The Elamites, the indigenous inhabitants of Persia, appear to have had considerable influence over the Persians, as seen, for example, in the Elamite dress worn by Persians and by Elamite objects carried by them that are depicted on the stone reliefs at Persepolis.

Cyrus established a government for his empire in which governors (satraps), who represented him in each province, were responsible for the administration, legislation and cultural activities of each province. And according to Xenophon, Cyrus also devised a postal system; the world's first.

When he died in a campaign against the tribes in eastern Iran in 530 BC, the world lost one of its greatest monarchs, since he was not only a mighty warrior and a wise organiser but also a tolerant, generous and magnanimous ruler. At the time of his death, his Medo-Persian Empire reached from the Aegean Sea in the west to India in the east, and from the border of Egypt in the south to the Caucasus Mountains in the north. After his death, his son and successor to the throne, Cambyses, added Egypt to the empire, an event probably planned for by Cyrus himself.

CYRUS AND ISRAEL

Evidence of Cyrus's enlightened reign is apparent from the record contained in the Cyrus Cylinder, discovered in Babylon in 1879. In 2010, the British Museum reported that two inscribed clay fragments found at Dailem near Babylon, which had been in its collection since 1881, had been identified as part of a cuneiform tablet inscribed with the same text as the Cyrus Cylinder. And in 1985, the Beijing Palace Museum acquired a horse bone discovered in China inscribed with cuneiform inscriptions apparently derived from the cylinder. Irving Finkel, curator in charge of the British Museum's Department of the Middle East, has suggested that the cylinder's text (or even the original cylinder itself) was sent around the Persian Empire and at

PARADISE? Pasargadae displayed the greatness of the Achaemenian kingdom with its palaces surrounded by magnificent gardens created by Cyrus himself. Remains of water channels attest to the harnessing of a water supply to maintain the style of gardens known as Paeredysios. It is this style of garden where the English word *paradise* evolved from.

PHOTO: ISTOCKPHOTO.COM

some point was copied to make the bone inscription. In the cylinder, Cyrus allows the exiled nations of Babylon to return to their homelands with their gods and to rebuild their temples. Note Irving Finkel's translation of part of the cylinder:

> *I am Cyrus, king of the universe, the great king, the powerful king, king of Babylon. . . . I collected together all of their people and returned them to their settlements, and the gods of the land of Sumer and Akkad which Nabonidus—to the fury of the lord of the gods—had brought into Shuanna, at the command of Marduk, the great lord, I returned them unharmed to their cells, in the sanctuaries that make them happy. May all the gods that I returned to their sanctuaries, every day before Marduk and Nabu, ask for a long life for me, and mention my good deeds . . .*

In view of such words, one can understand why the Cyrus Cylinder might well be considered the world's first declaration of human rights.

Cyrus is mentioned by name some 22 times by biblical writers, in the books of 2 Chronicles, Ezra, Isaiah and Daniel. While the Jews are not specifically mentioned on the Cyrus Cylinder, it nevertheless confirms what is recorded in the Bible:

> *"Thus says Cyrus king of Persia: All the kingdoms of the earth the Lord God of heaven has given me. And He has commanded me to build Him a house at Jerusalem which is in Judah. Who is among you of all His people? May the Lord his God be with him, and let him go up!" (2 Chronicles 36:23, NKJV)*

The similarity of this with Cyrus's decree mentioned by Ezra, and which he says was also found, by order of Darius I, among the Persian archives at the Palace Achmetha or Ecbatana (Ezra 1:2–4; 6:2–5), reveal them to be an accurate historical record of official documents.

But there exists more than just a historical record of Cyrus's interaction with Israel by the Bible writers. The biblical prophecies warned that Israel would be deported *en masse* to Babylon, but they also state that eventually Babylon would be brought down, allowing them to return to Jerusalem (Isaiah 39:6, 7; 43:14; 44:26; 47:1; 48:14, 20). It is in this context that the prophet Isaiah astoundingly names Cyrus as the instrument to bring these events to fruition. Notice the prophecy made about 100 years before the birth of Cyrus and 150 years before his conquest of Babylon:

> *"This is what the Lord says . . . of Jerusalem, 'It shall be inhabited,' of the towns of Judah, 'They shall be rebuilt,' and of their ruins, 'I will restore them,' who says to the watery deep, 'Be dry, and I will dry up your streams,' who says of Cyrus, 'He is my shepherd and will accomplish all that I please; he will say of Jerusalem, "Let it be rebuilt," and of the temple, "Let its foundations be laid"' " (Isaiah 44:24–28).*
>
> *"This is what the Lord says to his anointed, to Cyrus, whose right hand I take hold of to subdue nations*

MAP OF CYRUS'S ACHAEMENID EMPIRE Cyrus presented himself not as a conqueror but as a liberator to the nations he ruled showing respect toward the religious beliefs and cultural traditions of other races. These qualities earned him the respect and homage of all the people over whom he ruled.

CYRUS CYLINDER, now housed in the British Museum, is an ancient account of the conquest of Babylon by Cyrus in 539 BC. The cylinder provides evidence of Cyrus's wise leadership and also supports the Bible's record that Cyrus allowed the Jews to return to Jerusalem and rebuild their temple. The Cyrus Cylinder might well be considered the world's first declaration of human rights.

PHOTO: GARY WEBSTER

TOMB OF CYRUS. The details of Cyrus's death can vary by account, although all agree his remains were interred in his capital city of Pasargadae in this limestone tomb. The city remained an important dynastic centre until the empire was conquered by Alexander the Great in 330 BC. According to ancient writers, such as Herodotus and Arian, Alexander paid his respects to the tomb of Cyrus and had it restored.

before him and to strip kings of their armour, to open doors before him so that gates will not be shut: I will go before you and will level the mountains; I will break down gates of bronze and cut through bars of iron. I will give you hidden treasures, riches stored in secret places, so that you may know that I am the Lord, the God of Israel, who summons you by name. For the sake of Jacob my servant, of Israel my chosen, I summon you by name and bestow on you a title of honour, though you do not acknowledge me. I am the Lord, and there is no other; apart from me there is no God. I will strengthen you, though you have not acknowledged me, so that from the rising of the sun to the place of its setting people may know there is none besides me. I am the Lord, and there is no other. . . . I will raise up Cyrus in my righteousness: I will make all his ways straight. He will rebuild my city and set my exiles free, but not for a price or reward, says the Lord Almighty" (Isaiah 45:1–6, 13).

"Remember the former things, those of long ago; I am God, and there is no other; I am God, and there is none like me. I make known the end from the beginning, from ancient times, what is still to come. I say, 'My purpose will stand, and I will do all that I please.' From the east I summon a bird of prey; from a far-off land, a man to fulfil my purpose. What I have said, that I will bring about; what I have planned, that I will do" (Isaiah 46:9–11).

Note in these passages the very specific things Isaiah predicted about Cyrus some 150 years before his conquest of Babylon and also what the prophet Jeremiah (some 50 years before) also predicted about the same things:

1. Cyrus is mentioned by name. The prophet Jeremiah (51:11), some 50 years before Babylon's conquest by Cyrus, though not mentioning Cyrus by name, also predicted that a Median king would be the instrument to conquer Babylon.

2. Cyrus is to bring about the release of Israel from Babylon and their return to Jerusalem. Again, Jeremiah (25:11,12; 29:10) also predicted that the Jews would be returned to Jerusalem and their fortunes restored, after 70 years of captivity.

3. Cyrus is to facilitate the rebuilding of Jerusalem and its temple. Jeremiah (33:7) also predicted the rebuilding of Jerusalem after the return of the exiles.

4. Israel's return and the restoration of Jerusalem is to take place in association with the drying up of waters/ rivers. Jeremiah (50:38; 51:35, 36) likewise predicted the drying up of Babylon's waters in relation to its fall.

5. In Cyrus's conquest, city gates will be left open.

History, as recorded in the Nabonidus Chronicle, on the Cyrus Cylinder, by the Greek historians Herodotus (484–425 BC) and Xenophon (430–354 BC), and in the writings of the sixth century BC Jewish prophet Daniel (chapter 5), records the fulfilment of each of these specific predictions. The fifth chapter of Daniel is now regarded by scholars as ranking next to the Babylonian cuneiform literature in its accuracy. This is due to the fact that Daniel mentions Belshazzar as the king of Babylon at its conquest, a fact supported by Babylonian cuneiform documents. He

PHOTOS: BORNAMIR—ISTOCKPHOTO.COM

also records that a drunken festival was taking place at the time of its fall, a claim supported by both Herodotus and Xenophon.

The Nabonidus Chronicle informs us that Cyrus invaded Babylonia in 539 BC and routed the Medo-Persian army at the Battle of Opis. According to Herodotus and Xenophon, in October of that same year, soldiers of Cyrus, under Gobryas, besieged the city. Finding its walls impregnable, the Persians diverted the course of the Euphrates River so that it dropped to a level whereby the Persian army was able to wade along the riverbed, under the walls at the points where the river entered and exited the city. This occurred at the time of a festival during which the Babylonians left the gates of the walls along the bank of the river open, and since the residents, and to some extent the guards, of the city were distracted by the revelry of the festival, the nocturnal activities of the Persians went undetected and they conquered the city.

The fifth chapter of Daniel records that during Belshazzar's feast, the forces of Cyrus took the city and killed the king. Xenophon supports Daniel's assertion. Daniel also indicates the quick fall of Babylon, as do the Nabonidus Chronicle, the Cyrus Cylinder, Herodotus and Xenophon.

While the Cyrus Cylinder makes no mention of the Jews specifically, it does reveal that he allowed Babylonian captives, among whom of course were the Jews, to return to their homelands and rebuild their temples and restore their national forms of worship, thus supporting the claims of the writer of 2 Chronicles and Ezra that Cyrus allowed Jewish captives to return from Babylon to Jerusalem and rebuild the Temple. Consequently, the cylinder contains confirmation of Isaiah's prediction that Cyrus would be the instrument for returning the Jews to Jerusalem and rebuilding their temple.

In light of such incredible fulfilments of Isaiah's predictions, one can understand why higher critical scholars, who do not believe in prophetic foreknowledge and the supernatural in general, might wish to undermine Isaiah's prophecy of Cyrus by suggesting that the book of Isaiah had at least two authors, who wrote in different time periods—a so-called "first Isaiah," who wrote chapters one to 39 at the close of the eighth/early seventh century BC, and a "second Isaiah" or Deutero-Isaiah, who wrote chapters 40 to 66 (which contain the prophecies about Cyrus) after 539 BC, when the so-called predicted events would already have occurred. Some critics even assign the second half of the book to the Maccabean period, which is the second century BC and well after the events outlined.

However, scholarship quickly reveals the fallacy of such suggestions, demonstrating that the book had only one author who wrote it in the late eighth/early seventh century BC. The evidence for this includes the following:

THE NABONIDUS CHRONICLE (above) is a historiographical text from ancient Babylon. It describes the reign of Nabonidus, the last king of the Babylonian empire, who lost his realm to the Persian king Cyrus the Great in 539 BC.

A FOUR-WINGED GUARDIAN FIGURE AT PASARGADAE, which some archaeologists believe to be Cyrus the Great. Erosion by heat, violent winds and rain has had a detrimental effect on the winged man over the past decade. Since it was first recorded in 1808, the entire upper portion of the relief, which contained the Old Persian inscription "I, Cyrus, the King, an Achaemenian," has totally disappeared.

PHOTOS: GARY WEBSTER

1 There are many evidences of unity of thought and expression throughout the book of Isaiah. For example, a characteristic of Isaiah is his use of the term "the Holy One of Israel" as one of God's titles. It occurs 25 times in the book and only six times in the rest of the Old Testament. However it is found 12 times in chapters one to 39 (the section nearly all scholars believe was written at the close of the eighth/early seventh century BC) and 13 times in chapters 40 to 66. The title "the mighty One of Israel (or 'of Jacob,' another name for Israel)" is found only in the book of Isaiah and again in both sections (Isaiah 1:24; 30:29; 49:26; 60:16). Similarities of style and language between the two sections of Isaiah are much more impressive than its supposed differences.

2 The arching theme of both sections of the book is "deliverance." Chapters one to 39 present Jewish deliverance from sin, from Syria, Assyria and their other enemies, through repentance, reformation and renewed faith in God. Chapters 40 to 66 anticipate captivity in Babylon, but with the assurance that eventual deliverance will be as certain as that which was (then) recently experienced from Assyria during the time of Hezekiah. But more than that, eventually there will be deliverance from sin's dominion through faith in the coming Deliverer or Messiah. Thus, while there are apparent differences in subject matter between the two sections, a fundamental unity of thought and purpose pervades the whole book.

3 As mentioned, some critics have assigned a significant portion of the book of Isaiah to the Maccabean period (167–160 BC). However, there is evidence that the entire book already existed as one unit before that time, for writing about 180 BC, Jesus ben Sirach, the author of the apocryphal book of Ecclesiasticus (chapter 48:23–28), credited various sections of the book of Isaiah to the prophet whose name it bears.

4 But the best evidence that centuries before Christ the book of Isaiah was regarded as a single unit comes from two scrolls of Isaiah found in 1947 among the Dead Sea Scrolls. In both scrolls there is no evidence whatsoever that chapters one to 39 existed independently from chapters 40 to 66. Rather, the evidence is to the contrary, indicating that Isaiah the prophet authored all chapters in the late eighth/early seventh century BC, at least some 150 years before the events predicted concerning Cyrus.

5 The New Testament writers and characters such as Jesus and the apostle Paul accepted the book of Isaiah as a single unit without any hint of distinctions between the two sections.

6 According to Josephus (*Antiquities* 11.1.2), Cyrus read the prophecies left behind by Isaiah concerning himself, which Josephus says were written 140 years before the Temple was destroyed by the Babylonians.

7 Critics claim chapters 40 to 66 were written by a second Isaiah in exile in Babylon, yet: the cities had not yet been destroyed (Isaiah 40:9; 62:6); he excoriates unjust judges in Israel, implying that the government is still in operation (Isaiah 58:6); and the geography, flora and fauna mentioned are those of Palestine not Babylon (Isaiah 41:19; 44:14). The unmistakable conclusion is that it was composed in Palestine rather than in Babylon.

8 The post-exilic prophets (Haggai, Zechariah, Malachi, Ezra and Nehemiah) never mention idolatry as a sin after the exile. Yet, if as critics assert, chapters 40 to 66 were written in Babylon or late-dated in Israel after the return from exile, why does the author denounce idolatry (44:9-20; 57:4–5, 7; 65:2–4) so vehemently in this section? Such denunciation would be senseless after the exile, but makes perfect sense before it.

Clearly all of Isaiah was written by the same person in the late eighth/early seventh century BC. But what was the purpose of Isaiah's prophecy concerning Cyrus and his activities in relation to Israel? Ironically, it was just the opposite of that of the critics, whose ultimate purpose has been to deny the supernatural.

The purpose of the prophecy is threefold: First, that Cyrus will know that the Lord is the God of Israel; second, for Israel's sake, to bring them hope that they will be delivered from Babylon (through Cyrus); and, third, so the world ("from horizon to horizon") will know that the Lord is God. Note how this is emphasised in the Isaiah prophecy about Cyrus: "Thus says the Lord . . . Who says to the deep, 'Be dry! And I will dry up your rivers'; Who says of Cyrus, 'He is My shepherd, and he shall perform all My pleasure, saying to Jerusalem, 'You shall be built,' and to the temple, 'Your foundation shall be laid.'

"Thus says the Lord to His anointed, to Cyrus, whose right hand I have held . . . to subdue nations before him . . . to open before him the double doors, so that the gates will not be shut . . . *that you [Cyrus] may know that I, the Lord, Who call you by your name,* am the God of Israel. For Jacob My servant's sake, and Israel My elect, *I have even called you by your name;* I have named you, though you have not known Me. *I am the Lord, and there is no other; There is no God besides Me.* I will gird you, though you have not known Me, *That they may know from the rising of the sun to its setting that there is none besides Me.* I am the Lord, and there is no other" (Isaiah 44:24, 26–28; 45:1, 3–6, NKJV, italics added).

It is very clear from the above that one of the purposes of this prophecy is that Cyrus and the rest of humanity might know there is indeed a god, and only one God—the Lord. In fact, as one continues to read this "Cyrus prophecy," it is clearly the purpose of biblical prophecy in general: "Remember the former things of old, for *I am God, and there is no other; I am God, and there is none like Me, declaring the end from the beginning, and from ancient times things that are not yet done,* saying, 'My counsel shall stand, and I will do all My pleasure,' calling a bird of prey from the east, the man [Cyrus] who executes My counsel, from a far country. . . . I have spoken it; I will also bring it to pass. I have purposed it; I will also do it" (Isaiah 46:9–11, NKJV, italics added).

This same purpose of predictive prophecy—to believe in God—was also a stated purpose of predictions made by Jesus (John 13:19; 14:29). Little wonder higher criticism, which has no place for the supernatural, whose philosophy is based on human rationalism and naturalism, has sought to relegate this prophecy to a period after the events it refers to. If it were to have been composed in the late eighth/early seventh century BC—150 years before the predicted events—it would completely undermine their world view. ◆

Gertrude Caton-Thompson

IN MANY WAYS THE LIFE OF GERTRUDE CATON-THOMPSON IS THE story of the breaking down of social barriers, not only in the field of archaeology but across society in the wider Western world. Born in London in 1888, Caton-Thompson began life in a male, white European-dominated social and intellectual landscape, in which many believed that the European cultures and civilisations were "more evolved" than all others.

But Caton-Thompson, never one to let her male peers have all the fun in learning, ambitiously devoted her youth to her studies, eventually graduating in archaeology at Cambridge University in 1919.

INTO EGYPT

Her giftedness and understanding of ancient cultures was obvious, and in 1921, she secured employment with the British School of Archaeology in Egypt, working under the notable and respected Sir Flinders Petrie. She worked closely with Petrie while excavating Abydos in Upper Egypt. But

ARCHAEOLOGIST GERTRUDE CATON–THOMPSON She was a student at Pembroke College, Cambridge University, graduating in archaeology in 1919.

PHOTO: ROYAL GEOGRAPHICAL SOCIETY (WITH IBG)

GREAT ZIMBABWE The ruins of Great Zimbabwe form three distinctive architectural groupings, which have been labelled as the Hill Complex, the Valley Complex and the Great Enclosure. The meaning or purpose of the three groupings is unknown. While most European scholars of her time believed the ruins to have been built by the Phoenicians or another Asiatic people, Caton-Thompson correctly presented the ruins as the relic of an advanced African culture, constructed over some 400 years from around AD 1100 to 1500.

ZIMBABWE BIRD When the ruins of Great Zimbabwe site were excavated by treasure-hunters in the late nineteenth century, eight carvings of the iconic bird (foreground, above) were unearthed. They became the symbol of the modern nation of Zimbabwe. In the background stands the 10-metre- (33 ft) tall conical tower located in the Great Enclosure. This tower is solid, built of granite blocks, the purpose of which remains a mystery.

Video

Tap here to watch a short video about the history of Great Zimbabwe. *Active internet connection required.*

over time she developed a hunger to work independently, and so as Petrie began to focus more on finding noble Egyptians' tombs, Caton-Thompson headed out into the desert in search of evidence for prehistoric African cultures, an endeavour which turned up many incredibly old human artefacts.

AN INDEPENDENT WOMAN

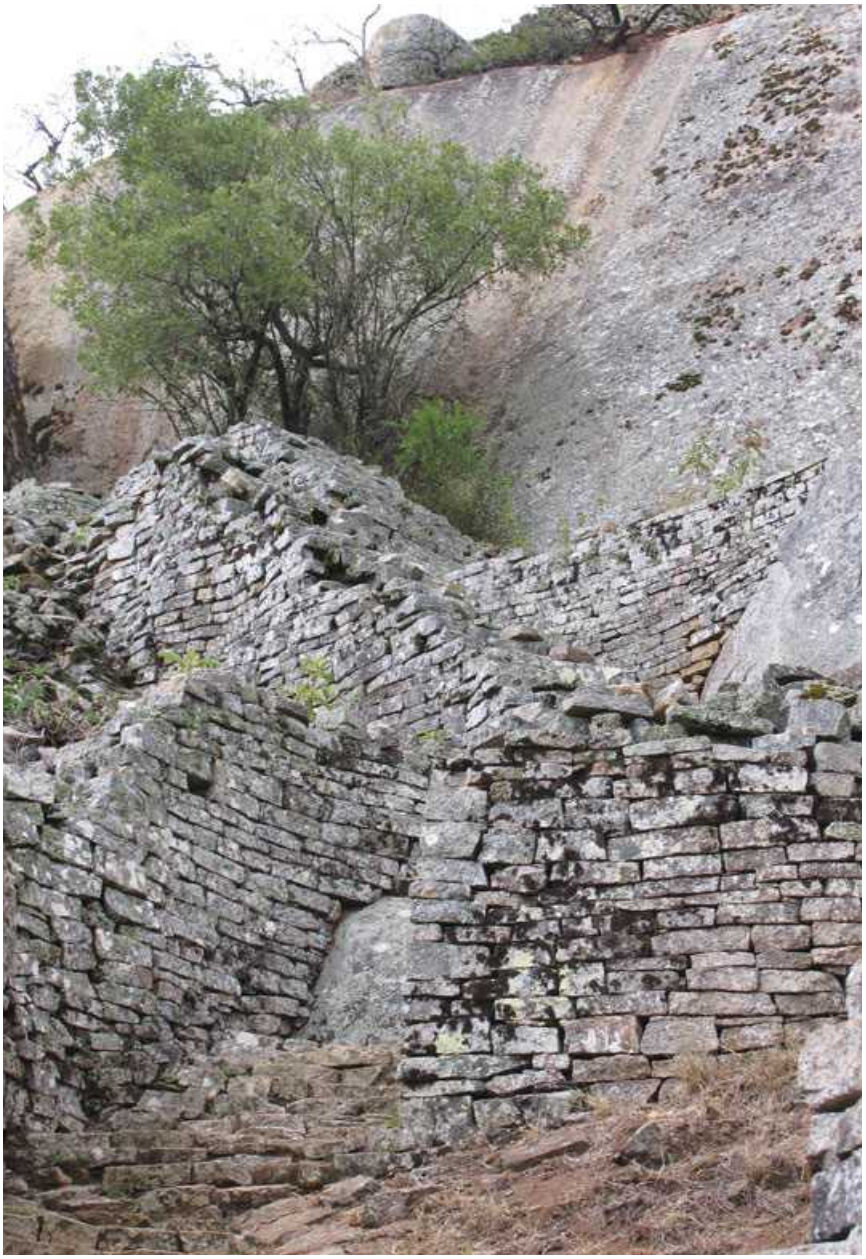
In 1924, Caton-Thompson began to excavate the Fayum Depression to the west of the Nile, where she discovered ancient farming settlements, which had millennia-old storage pits containing ancient carbonised wheat and barley seed. These settlements were dated to the fourth millennium BC, making them the oldest known farming settlements at the time anywhere in the world.

These discoveries cemented Caton-Thompson's place as a gifted and able archaeologist and in 1928 the British Association for the Advancement of Science employed her to lead new excavations at the ruins of the ancient Zimbabwe settlement known as "Greta Zimbabwe." This position, in the context of the times, was an incredible honour for Caton-Thompson. A female leading a team of archaeologists in deepest, dangerous Africa was unheard of. But Caton-Thompson only had eyes for her job. She often said that the political and social issues of gender and race were simply "distractions" from her far more important archaeological work.

At Great Zimbabwe (Shona: *houses of stone*), stone structures stand in a field, with a nearby large castle-like enclosure atop a hill, fondly known as "The Acropolis." Most European scholars believed these ruins had to have been built by the Phoenicians or another Asiatic people. The curious idea that Africans might be capable of such constructions independent of Asian or European know-how was something not seriously considered.

That is, until Caton-Thompson arrived there. Using excavation methods learned under Petrie, Caton-Thompson placed her trenches thoughtfully at the site, giving careful study to each artefact as it was excavated, no matter how large or small. By employing rigorous archaeological methods,

PHOTOS: LEE DUNSTAN | ALAMY



SECTION OF THE HILL COMPLEX The most impressive and striking remains of Great Zimbabwe are these massive stone walls. Granite blocks were cut into the same size and stacked from the ground up, showing the masonry to be highly developed.

Caton-Thompson found, much to her pleasant surprise, that the ruins of Great Zimbabwe were indeed the relics of an African culture that likely began as a small African farming village in ancient times and which progressed to its building zenith in Medieval times prior to European contact. In other words, Caton-Thompson had found that, unlike the racist assumptions of her day, indigenous Africans were just as capable of creating sophisticated cultures as Europeans or Asians.

The findings were revolutionary, so to ensure she was correct in her assumptions and deductions, a number of European (male) archaeologists made the journey to Great Zimbabwe to see the site for themselves. They concluded that Caton-Thompson was, indeed, correct. Thus, it became increasingly clear to many archaeologists, most of whom were European, that colonial prejudices towards Africans were unfounded. Not that that should have come as a surprise. After all, Africa had produced the sophisticated Egyptian and Nubian civilisations, which were two of the most highly developed human civilisations of the entire ancient world.

AN EXTRAORDINARY WOMAN

Gertrude Caton-Thompson retired from fieldwork only in 1957, publishing her autobiography entitled *Mixed Memoirs,* in 1983, when aged in her nineties. An extraordinary woman, she died in Worcestershire in 1985, having played an outstanding part in the worlds of both archaeology and modern Western society. ◆

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Aliens or Egyptians

Who Really Built the Pyramids?

DIGGINGS editor **Gary Webster** takes a closer look at the claims of sensationalists.

MANY TODAY BELIEVE IT WAS IMPOSSIBLE FOR HUMANS TO build such great structures as the Great Pyramids of Giza, something reinforced by dubious claims made on television programs and the internet. Just google "Aliens built the pyramids" and you will discover that many believe aliens were in fact responsible for the construction of these great monuments.

While there is no known written record or relief detailing how the pyramids were constructed, there is nonetheless abundant archaeological evidence indicating that the Egyptians themselves were responsible for their building. Evidence for their human construction has been found in the remains of the quarries, roads, tools, records of the workers and the towns in which they lived. We also know why they were built and we can see their lengthy and imperfect evolution before they reached their architectural zenith in

PHOTO: FRED MANTEL—ISTOCKPHOTO.COM

the Great Pyramid of Giza. What follows is a highlight summary of the evidence.

THE PURPOSE OF THE PYRAMIDS

Those who believe that aliens built the pyramids think it a mystery that the Egyptians or any other ancient people could or would build such an immense monument for burying a king. However, we do know *why* the Egyptians built pyramids.

While being tombs for the pharoahs, the pyramids were also symbols of the ruler's supreme power. Above all, they were monuments to divine Egyptian kingship, where the king would be transformed into a god. Based on an ancient myth, Egyptians believed that at death, kings took on the role of the god Osiris, ruler of the underworld, while their sons took the role of Horus and the kingship. Though deceased, the former king would join the eternal cycle of life to be reborn every day with the sun god. The Egyptians believed that the pyramid facilitated this. Thus, more fundamentally, they were also "resurrection machines," designed to produce and ensure eternal life. They also legitimised a successor's rule on the throne, since the pyramid symbolised their father's new divinity. But why the pyramid shape? And, does that have meaning?

First, pyramids developed from an older form of royal tomb called a *mastaba,* which were rectangular flat-roofed buildings. Under the brilliant architect, Imhotep, a series of mastabas, each one smaller than the previous one, were stacked one on top of another resulting in the form of a stepped pyramid. Second, based on an Egyptian creation myth in which the world was a primeval mound that arose (came into being) out of the waters of chaos, the pyramid, which is a stylised mound, was intended as a place of rebirth.

Since the sun perpetually shines in Egypt, the sun god Re was the supreme deity, and the king aspired to join him in being reborn every sunrise. The pyramid form was shaped like the rays from the sun and its staircase-like form allowed it to serve as the means of ascension. Each pyramid was capped with a *pyramidion*—a pyramidal stone block. The carvings on the pyramidion of Amenemhat III's pyramid at Dashur confirm its celestial role for the king, as it is inscribed with a pair of eyes looking up at the sun disk and hieroglyphs that read "Amenemhat beholds the perfection of Re."

The ancient names for the pyramids reveal their purpose as royal monuments and symbolic locations for the pharaoh's divine transformation and journey to heaven. The Great Pyramid is called "Khufu's horizon," and the other two Giza pyramids are called "Great is Khafre" and "Menkaure is Divine." Other pyramid names include "Djedefre is a Sehed-Star" and Sahure's "Rising of the Ba-Spirit." Being interested in the celestial aspect of the afterlife doesn't mean the Egyptians were influenced by aliens any more than astronomers are influenced by aliens because they search space with their telescopes.

Pyramids were clearly part of Egyptian religion, forming the focal point for the worship of the deceased king. Rituals involved cleaning, dressing and offering food and drink to statues of the king. Documents such as the Abusir papyri even record the day-to-day activities centred around the pyramids.

Some alien-builder websites claim that pyramids were never used as tombs, however this is definitely incorrect, as some still contain huge stone sarcophagi that were used to hold royal mummies. Funerary texts are even written inside the burial chambers of pyramids built after the Giza ones, and temples attached to the pyramids were used for funeral mortuary rituals.

The pyramid's purpose is no mystery, since the Egyptians themselves reveal what their purpose was and how they were used and maintained.

PYRAMID BUILDING DEVELOPED OVER TIME

It is often claimed by "alien" theorists that the pyramids suddenly appeared out of nowhere. But this ignores clear evidence for the evolution of the form and building process of the pyramids. A number of early pyramids show that the Egyptians got things wrong before they were able to make the great Giza monuments.

The first pyramid was the Step Pyramid at Saqqara. It began as a traditional mastaba for the Third Dynasty king Djoser. Imhotep, the architect, then enlarged the basic structure to be a square and then built a smaller mastaba-like square on top. Inspired by it, Imhotep expanded the building by adding a fourth, fifth and sixth level to eventually form the Step Pyramid.

However, it was not a true pyramid with smooth sides. Other stepped-pyramid projects followed and finally the first attempt at a true pyramid was developed at Meidum for Pharoah Sneferu. It was originally intended to be a seven-step pyramid, but was then expanded to eight steps and completed in the 14th year of Sneferu's reign. However, in his 28th or 29th year, workers returned to fill out the rest of it into a true pyramid. But, unfortunately, due to constructional deficiencies, the outer casing collapsed.

However, before Sneferu attempted to change the Meidum pyramid into a true pyramid, he began building another pyramid at Dashur, which was the first true pyramid to be intended as such from its beginning. Unfamiliar with building such a structure, construction began at too steep an angle (60°). After severe structural problems were noticed, the architects altered it to a 55° angle as a precautionary measure. Following more problems, it was again changed, this time to a 44° slope, which gives it a bent look, thus leading it to be called the Bent Pyramid.

In order to support their theory, some advocates of the alien hypothesis claim that the Bent Pyramid was a human imitation of the alien-built Giza pyramids. However, the Bent Pyramid is conclusively dated to years 15–30 of Sneferu's reign and therefore before the Giza pyramids.

Since this first attempt at a true pyramid proved too problematic, Sneferu also abandoned it, and started yet another pyramid at Meidum. Learning from the mistakes of his previous attempts, this north pyramid resulted in the first successful true pyramid.

Only after less successful attempts, and experience gained by architects and workers, was the stage set for the construction of the greatest wonders of the ancient world: the Giza pyramids.

PHOTO: GARY WEBSTER

DOLORITE STONES AT THE ASWAN, EGYPT, QUARRY Scores of such round stones were found at the quarry. An unproven claim is that the stones pulverised the rock around the edge of the granite block that was to be extracted. However, it is also thought they may have simply been used like ball bearings to move the blocks after extraction.

HOW THE EGYPTIANS BUILT THE PYRAMIDS

Ancient Egyptians were in a position to build the pyramids because the economy, resources and population of the Egyptian civilisation were all under the control of a single ruler, who could mobilise everyone into a monumental building project. Pyramid building was a complex process carried out over a number of years with many different stages that required enormous resources. However, as will be seen, it was one which the Egyptians were certainly capable of carrying out.

The Great Pyramid of Khufu is made of some 2.3 million stones and is believed to have been built throughout the entire length of the pharaoh's reign—some 23 years, according to the Turin Papyrus. To achieve this, builders had to lay some 340 blocks each day through an annual workforce of 20,000–30,000 people. The bulk of the stone was more easily moved since it was in the base of the pyramid, covering the largest area. Furthermore the core itself included many irregular stones and debris fill, thus shortening the amount of time needed. There were various building stages:

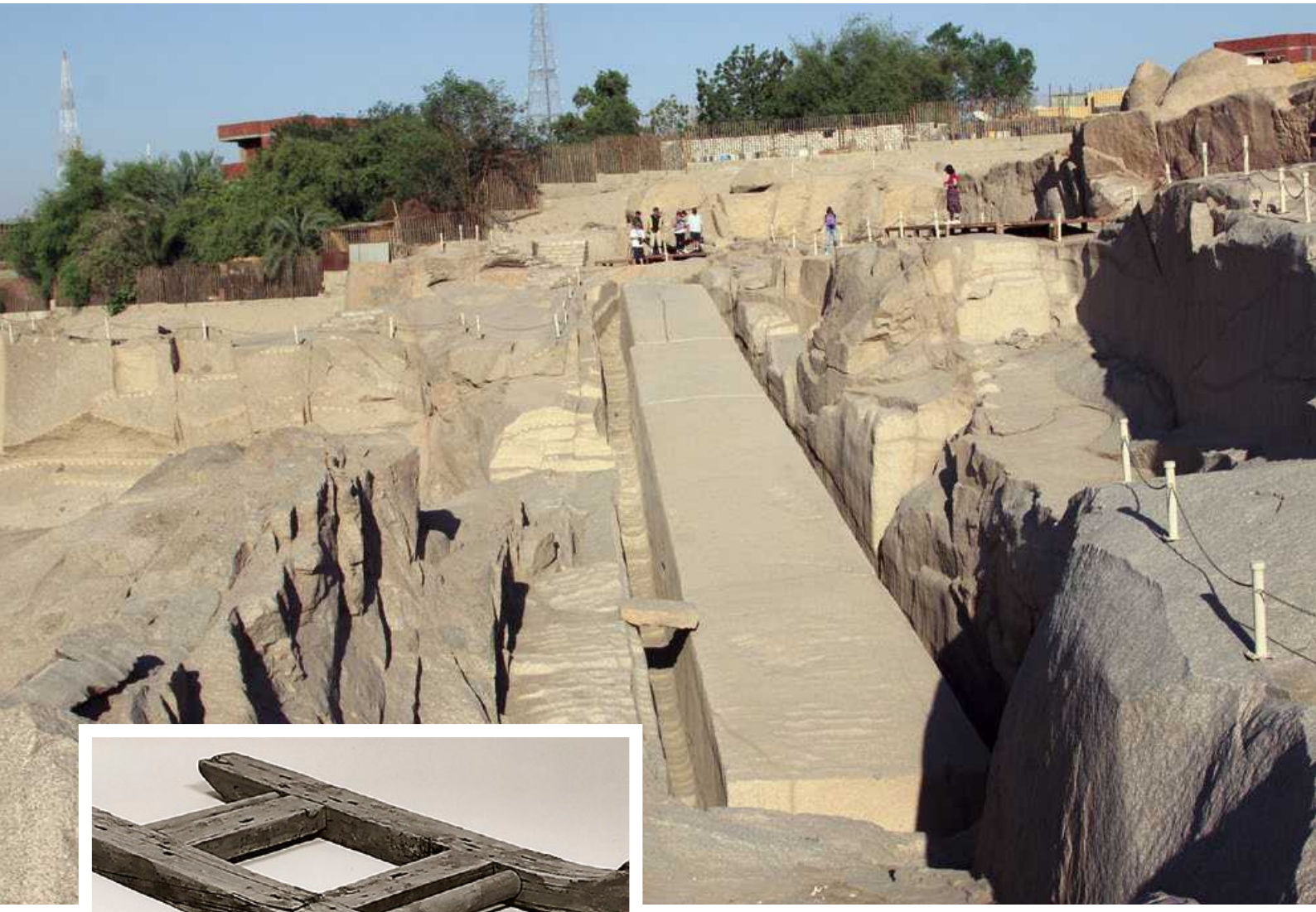
1. PLANNING AND ALIGNING THE PYRAMIDS

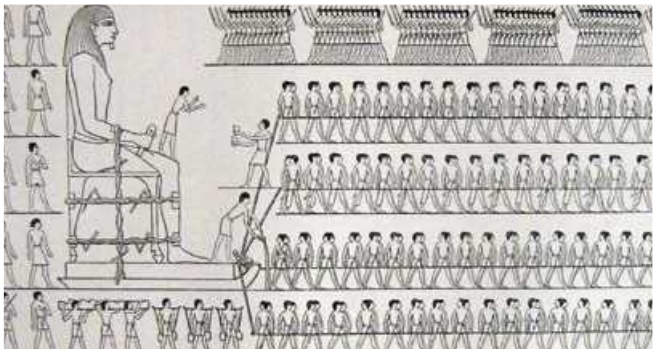
The Egyptians planned their buildings with great care and architectural precision. At Amenemhat III's Hawara pyramid, Rainer Stadlemann discovered a small limestone architect's model for the pyramid's innovative substructure, therefore providing evidence that miniature architect's models were made in similar fashion as today.

An "alien" website claims that only aliens could have aligned the pyramids so accurately with the points of the compass so many thousands of years ago. But they overlook the fact that some Egyptian temple priests devoted all their time to observing the heavens. Incredible precision could be achieved by watching the stars. We know the Egyptians used the stars to assist them in their architectural projects before the Giza pyramids were built, since the ceremony of "stretching the cord," which is dependent on astronomical knowledge, can be found on a granite block of the reign of the Second Dynasty king Khasekhemwy (2650 BC*). This ceremony was carried out using ropes tied to wooden pegs pounded into the ground. The numerous round holes that have been found cut into the bedrock around the foundations of pyramids and their temples may have been for measuring pegs.

Recently Kate Spence, an Egyptologist at the University of Cambridge, postulated convincingly that the Great Pyramid architects sighted on two stars—b-*Ursae Minoris* and z-*Ursae Majoris*—which revolve around the North Pole. These stars would have been perfectly aligned around 2467 BC*, the very date when Khufu's pyramid was thought to have been built. This theory is supported by the fact that earlier and later pyramids display inaccuracies in their orientation that are in close correlation with the degree to which the alignment of these two stars deviates from true north.

Egyptian architects, surveyors and builders are known to have used the *merkhet* (the "instrument of knowing," similar to an astrolabe), the *bay* (a sighting tool probably made from the central rib of a palm leaf) and plumb bobs.





THE "UNFINISHED OBELISK," ASWAN At this Eighteenth Dynasty Egyptian quarry in Aswan, the process of extracting huge blocks of stone for building is clearly visible.

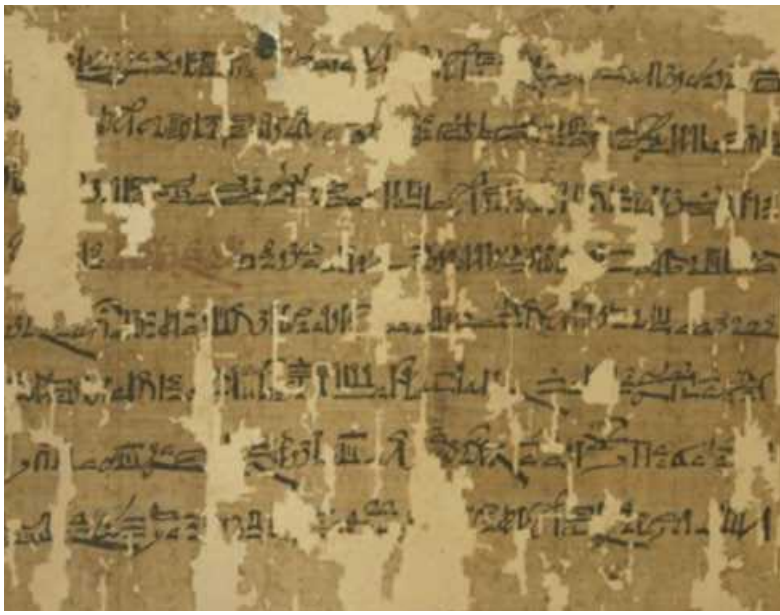
SLEDGE (INSET) from the mortuary complex of Senwosret I, Metropolitan Museum of Art, New York. A device similar to this would have been used to transport large stone blocks over land, aided by other mechanisms, as illustrated in this wall painting (lower left) from the tomb of Djehutihotep. It pictures a large statue being transported by sledge, with a person standing on the front wetting the sand to allow easier movement.

Archaeologists have also discovered set squares and Pythagorean triangles. All of these instruments would have enabled ancient Egyptian builders to lay out straight lines and right-angles, and to orient the sides and corners of structures in accordance with astronomical alignments. Once the four corners had been plotted, the Egyptians aligned the straight sides by stretching a rope between each corner in the "stretching of the cord" ceremony. Buildings much older than the pyramids were laid out using a unit called a cubit (about 52.5 cm). The angle of inclination of the pyramid's sloping faces was calculated by the Egyptians using a simple and precise method as seen in the Rhind Mathematical Papyrus.

2. QUARRYING

A limestone quarry, located on the Giza plateau, 300 m (985 ft) south of the Great Pyramid, reveals that local limestone was used for the pyramid core. The quarry reveals how the blocks were cut out. In the quarry are the stumps of approximately 3- x 3-m blocks removed thousands of years ago. Trenches are found between them where the stonecutters would have worked. Blocks of stone were cut by pounding channels into the limestone using hammer stones to separate them from bedrock. These channels are clearly visible even today. The blocks were then detached

PHOTOS: GARY WEBSTER | METMUSEUM.ORG



PAPYRUS ANASTASI I This Nineteenth Dynasty papyrus in the British Museum describes what is possibly a spiral ramp built around a pyramid.

using large wooden levers. Near the Sphinx, and in Menkaure's quarry, can be found a number of unfinished quarry blocks that are almost detached from the bedrock. Huge lever sockets are also visible in Menkaure's quarry.

The outer casing of the Great Pyramid was made from finer limestone and granite that were transported by boat via the Nile from Tura and Aswan, while the king's chamber was made entirely from blocks of Aswan granite. Tool marks preserved on many soft-stone quarry walls (e.g. the sandstone quarries at Gebel el-Silsila) indicate that some form of pointed copper alloy pick, axe or maul was also used during the Old and Middle Kingdoms. Mallet-driven pointed chisels were used from the Eighteenth Dynasty onwards. However this technique would have been unsuitable for quarrying harder stones such as granite. Workers in Old Kingdom quarries probably simply prised large boulders of granite out of the sand. From the Eighteenth Dynasty, granite was cut from Aswan quarries. Unknown tools were used to cut the edges of the granite block that was to be extracted. Workers then cut slots in the bottom of the holes using the same tools. Wooden pegs were then rammed into the slots and filled with water. As the water expanded the pegs, the stones splintered off. An unfinished obelisk still sitting at an ancient quarry in Aswan reveals this process.

Archaeologists have also discovered that the pyramids show human construction in their flaws: The outer shell has very fine polished limestone laid with great accuracy in its joints, while the inner core was very sloppy, with stones not accurately joined at all, and pebbles, cobbles, broken stones and large amounts of gypsum mortar jammed down between the large spaces between the stone blocks.

Fragments of tools, tool marks in the stones and bits of pottery characteristic of the Old Kingdom period were found in many places, even in the largest of the Giza pyramids, again revealing construction by humans.

3. LABOUR USED

There is abundant evidence left of the people who performed the work of building the pyramids. In recent years Egyptologist, Mark Lehner, discovered a city of the pyramid builders on the Giza plateau, complete with bakeries; institutional buildings; a building for working copper (the hardest metal known to the ancient Egyptians, and used in tools for quarrying and dressing stones); long corridor-like rooms (the Gallery Complex) for sleeping 1600–2000 workers; a site for the processing or consuming of fish; and huge quantities of cattle, sheep and goat bones—"enough to feed several thousand people, even if they ate meat every day," said Lehner.

Even the tombs of workers who constructed the pyramids have been discovered. The city and tombs demonstrate that the pyramids were built by paid labourers rather than slaves.

Early in the twentieth century, George Reisner found workers' graffiti that revealed the pyramid builders were organised into labour units with names like "Friends of Khufu" or "Drunkards of Menkaure." They even graffitied their clearly Egyptian names on the buildings! We now know that the workers were organised into crews of roughly 2000 conscripted peasants, made up of two gangs of 1000. These gangs were divided into five groups of 200 men. Each group was made up of 10 divisions of 20 men.

Some stones from Middle Kingdom pyramids have rough hieroglyphic notes inscribed on them for either scribes or controllers. Such notes consist of the date of transport, the workmen in charge of the block and the stage of transport. Some of the following messages have been written on various stone blocks: "brought from the quarry"; "removal from the quarry"; "delivered at the embankment [or harbour]"; "brought from the embankment"; "delivered to storage enclosures"; "brought" and "dragged" to the pyramid; and, "delivered to the ramp." Herdsmen, who may have driven oxen that pulled the stone, are also mentioned.

Stones also record the names of the teams responsible for them. Written documents have been discovered that deal with the pyramid builders. Some of the Lahun Papyri detail the dragging of stone blocks by groups of workers involved in building the pyramid of Senwosret II.

4. TRANSPORT

While most of the stone blocks were quarried near the pyramid, any finer stone that was quarried from further away was transported via the Nile River by boat. It seems wooden sledges were used to transport the blocks over land as a 4.2-metre-long sledge was found near the pyramid of Senwosret I. A wall painting from the tomb of Djehutihotep (1900 BC) shows a large statue being transported by a sledge. These sledges were drawn by oxen and men, since a number of tomb and temple wall paintings depict the transportation of stones by water and by sledges that are drawn by men or oxen.

Roads and tracks were made for the sledges. Such roads

PHOTO: BRITISH MUSEUM

PYRAMID OF KHUFU, GIZA Traces of a "staircase ramp" leading up one face of this pyramid have been found.

and tracks have been found at Lisht near the Twelfth Dynasty pyramids of Amenemhat I and Senwosret I. The roads at Lisht are up to 12 m (36 ft) in width and were made with a foundation consisting of limestone chips and mortar fill, with wooden beams (spaced like railway sleepers) inserted. Over the top was a layer of limestone chips and white gypsum that provided a smooth, solid surface.

Water was used as a lubricant for the ground to make it easier to pull the sledges. A wall painting from the tomb of Djehutihotep shows a large statue being transported by a sledge with a person on the front of the sledge pouring out water to wet the sand, reducing friction. It is clear that transporting large amounts of stone was well within the ancient Egyptians' capabilities.

5. LAYING THE BLOCKS

When moving stones into place, in order to preserve the exact alignment of the walls, corner blocks were set first. Other blocks were then brought in and moved into their final place using levers. A casing block of Khufu's pyramid shows a lever hole in the base of the block, which was then filled in with plaster. Since different teams laid blocks from each of the pyramid's corners, there could be gaps in the middle, which were then filled with smaller blocks. This is clearly seen in the Meidum pyramid.

THE USE OF RAMPS IN PYRAMID BUILDING

Archaeologists believe ramps were used to drag the blocks of stone to their positions in the pyramids. Some of the step mastabas of the Third Dynasty, which are the proto-pyramids, show evidence that they had ramps on each side. While no ramps have survived at the Great Pyramid itself, traces have been discovered at the Great Pyramid and around other Old Kingdom pyramids. The Meidum pyramid has indications that a ramp was applied to the outer casing. Traces of a "staircase ramp," which was a steep and narrow set of steps leading up one face of the pyramid, have also been found at the Sinki, Abu Ghurob and Lisht pyramids.

A "spiral ramp" was possibly described in the Nineteenth Dynasty Papyrus Anastasi I. Traces of "interior ramps" have been found inside the remains of the pyramids of Sahura, Nyuserra and Neferirkara, at Abusir, and of Pepi II, at Saqqara.

With the use of such ramps, 50 per cent of the blocks could have been towed to a height of 30–50 m (90–165 ft). These ramps, made from limestone chip, tafla and gypsum, rather than stone blocks, would have been easy to build and dismantle.

PYRAMID BUILDING FEASIBLE

Many websites display a misunderstanding of the nature of pyramids. One such site states that the pyramid stones are megaton (1 million ton) rocks, which could simply never be moved by humans. The blocks were definitely not a million tonnes each. Rather, on average, they weighed about 2.5 tonnes. Surrounding the blocks with teams of men, using cattle as well, which the Egyptians sometimes used, and wetting the sand would have made the job very doable, since the Nova pyramid-building experiment revealed that 20 men could easily pull a two-tonne block along lubricated tracks.

People assume that since we don't build such pyramids today, it would have been impossible for the ancient Egyptians to do so. However, in the NOVA pyramid-building experiment it took just 40 days to build a pyramid measuring 6 m (20 ft) high using mainly ancient technologies and a team of just 44 workmen, none of

PHOTO: GARY WEBSTER

whom had any experience in pyramid building. If this can be done as just an experiment, there is no question that the state-controlled Egyptian system could acquire and organise thousands of workers over a number of years to build a real pyramid.

THE GIZA PYRAMIDS AND ASTRAL ALIGNMENT

Robert Bauval and Adrian Gilbert theorise that the layout pattern of the pyramids is identical to the three belt stars of the constellation Orion. However, in all probability this is just pure coincidence. The belt of Orion is famous in part because of the natural simplicity of its layout. The arrangement of the Giza pyramids in that pattern was probably because it offered the best line of sight. Being laid out in a diagonal line, the pyramids do not block each other.

To strengthen the connection with their Orion orientation theory, however, Bauval and Gilbert, using computer software to find when the alignment of the pyramids would have exactly mirrored the constellation Orion in the sky, claimed this occurred in 10,450 BC, and that this is therefore the date, before Egyptian civilisation, that the aliens built the pyramids. However, while there is absolutely no evidence the pyramids existed before the Egyptians, there is abundant evidence that they are the cultural, religious and political products of the early Egyptian state. The Giza pyramids were built during the Fourth Dynasty, which according to current Egyptian chronology, dates to around 2575–2450 BC.

Radiocarbon dating was carried out on the Great Pyramid several times in the 1980s and '90s. It was initially funded by the Edgar Cayce Foundation, a group that also wanted the pyramids to date to 10,500 BC, because they believed they were remnants of Atlantean society. While this dating method is not always accurate, the radiocarbon date for the Great Pyramid ranged from 2660 to 3809 BC, so not so far off other reckonings. Dating of a funerary boat found buried beside the Great Pyramid was radiocarbon–dated to about 2600 BC. Thus the pyramid certainly does not date from 10,500 BC.

Clearly there is abundant evidence that the Great Pyramids were built by very human Egyptians rather than by aliens. Interestingly, probably the world's leading authority on the Giza pyramids today, Mark Lehner, first went to Egypt as a New Age student, intrigued by the mysteries of the "Sleeping Prophet," Edgar Cayce. As mentioned, Cayce believed the Giza pyramids to be remnants of an Atlantean society and also asserted there was a "hall of records" beneath the Egyptian Sphinx that held the historical texts of Atlantis. However, the longer Lehner worked on the Giza plateau, the more he realised that such notions "could not stand up to the bedrock reality of the Giza Plateau." Accordingly he turned to an open-minded scientific method of discovery in order to understand the culture better. One can only hope that alien theorists will be as open-minded as Lehner was to the evidence. ◆

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This article has drawn on many sources, but moreso those acknowledged below, and especially on Egyptologist Margaret Maitland's excellent blog, *Why the Aliens Did Not Build the Pyramids*. Eloquentpeasant.com, The Eloquent Peasant, August 24, 2007. Web, December 28, 2015.

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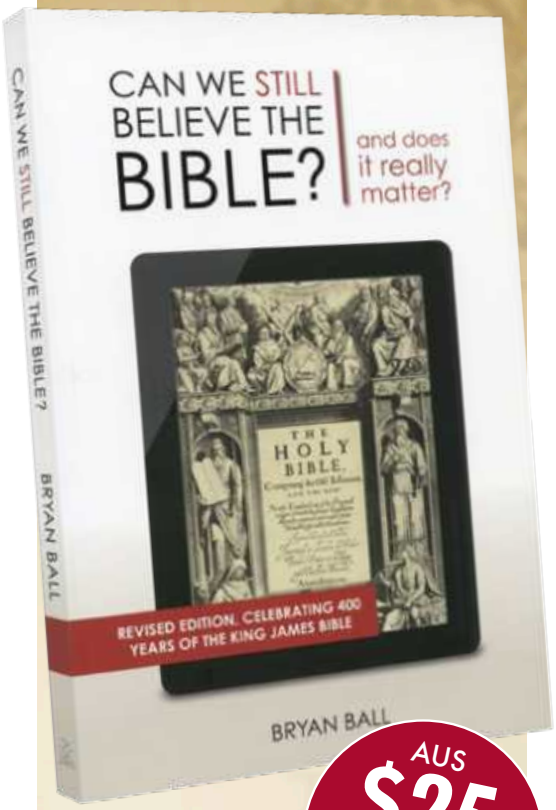
* All dated events in this article are according to the commonly accepted Egyptian chronology.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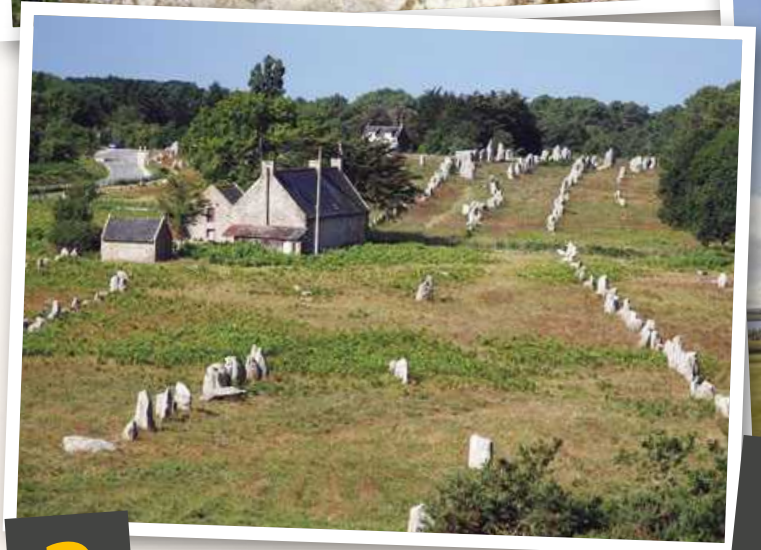
ARCHAEOLOGICAL INSIGHTS AND INTERESTING FACTS

7 STONE CIRCL from around

When you think of stone circles, chances are you think of Stonehenge. However, there are thousands of stone circles, ellipses and ovoids around the planet, all identifiable as a ring of upright stones (menhirs or megaliths). They were constructed by ancient peoples for astronomical, astrological and spiritual uses. **Kerri Hillsdon** has tracked down seven such monuments, some not so far away.

1 MEDICINE WHEEL
WYOMING, USA

Medicine wheels are Native American ritual sites, identified by a central cairn with 28 spokes radiating to an outer ring. The Wyoming Medicine Wheel is 23 m (75 ft) in diameter and one of the largest. Orthodox opinion is that it dates to AD 1200–1700, and like the other medicine wheels, has a celestial and ritual purpose.



2 ALIGNEMENTS DE CARNAC
BRITTANY, FRANCE

Surrounding the village of Carnac in France is the largest known collection of megaliths in the world. Claimed to be Neolithic, 3000 locally-cut stones are aligned in long rows and circles in relatively dense formations.

3 STONES OF STENNESS
ORKNEYS, SCOTLAND

The oldest henge in Britain, its slender sandstone columns reach a height of 5–6 m (16–19 ft), their tops cut at sharp angles. However, only four remain of the original 10–12. In the centre is the ancient hearth of an older dwelling and the entire structure is surrounded by a now-filled 2-metre- (6.5 ft) wide, 7-metre- (23ft) deep ditch.

PHOTOS: COURTESY OF THE US FOREST SERVICE | JOHN BRAID—DREAMSTIME

ES
the World

5 DEER STONES
MONGOLIA

The steppes of Mongolia and Siberia have scattered across them sharply-cut granite megaliths, also known as "deer stones" because of the deer-shaped petroglyphs etched on their weathered surfaces. They have been dated to the Bronze Age and are associated with burials and rituals.

6 WURDI YOUANG
VICTORIA, AUSTRALIA

Comprised of some 100 locally-sourced basalt megaliths, the egg-shaped enclosure at Wurdi Youang is on land traditionally owned by the Wathaurong Aboriginal people, just west of Melbourne. Each weathered stone is 20–100 cm high and is laid out on an east-west axis, which, when combined with outlying stones, aligns with the equinox and the winter and summer solstices. As for its age, it is older than European settlement, but its exact date of construction is still being researched. Access is strictly by permission only.

4 SENEGAMBIAN STONE CIRCLES
GAMBIA RIVER, AFRICA

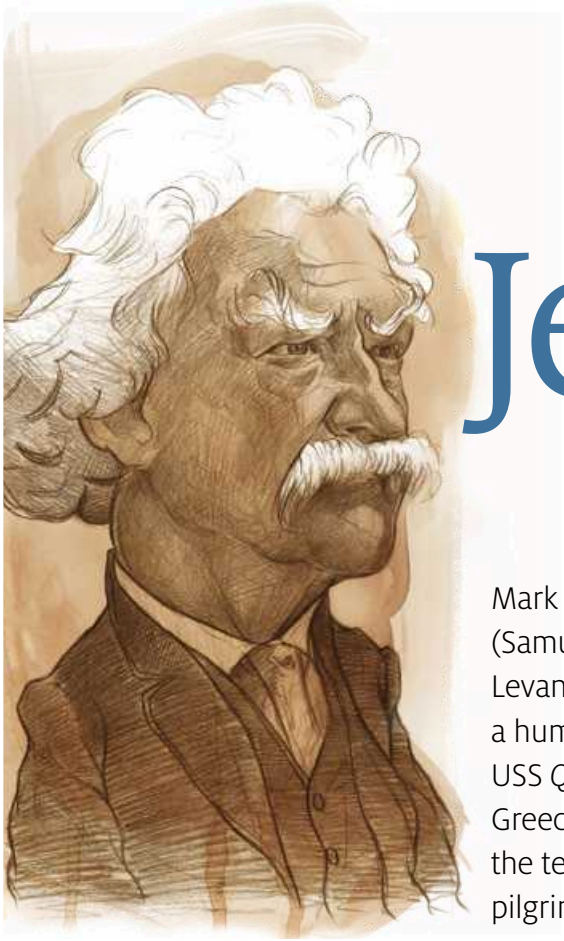
Spread across 350 km (220 miles) of the River Gambia are approximately 1000 stone enclosures. Made predominately of laterite, an iron-heavy stone, these monoliths were cleverly crafted and raised over a period of 1500 years, from around 300 BC. Sine Ngayene in Senegal is the largest site, consisting of 52 circles including one double circle.

Tap here to watch a short video about the Senegambian Stone Circles. *Active internet connection required.*

7 ZORATS KARER (KARAHUNJ)
SISIAN, ARMENIA

Literally translated as “army stones,” this circular stone enclosure sits on a plateau among a ceremonial avenue, burial cists and menhirs. Made from local basalt, this site has been considered sacred for thousands of years.

PHOTOS: CVVOEVALE | DAVOR LOVINCIC—ISTOCKPHOTO.COM | TREVKITT—DREAMSTIME.COM



Part 10 Jerusalem Again!

Mark Twain's *The Innocents Abroad* chronicles the author's (Samuel Langhorne Clemens) "Grand Tour" to Europe and the Levant. Originally written as a series of newspaper dispatches, it is a humorous and satirical account. Travelling aboard the steamer USS *Quaker City*, the travellers—or pilgrims—visit France, Italy, Greece, Turkey, the Holy Land and, finally, Egypt. In this episode, the tenth of our series, the now jaded and somewhat sceptical pilgrim band wanders the streets of Jerusalem one final time.

WE WERE STANDING IN A NARROW STREET, by the Tower of Antonio. "On these stones that are crumbling away," the guide said, "the Saviour sat and rested before taking up the cross. This is the beginning of the Sorrowful Way, or the Way of Grief." The party took note of the sacred spot, and moved on.

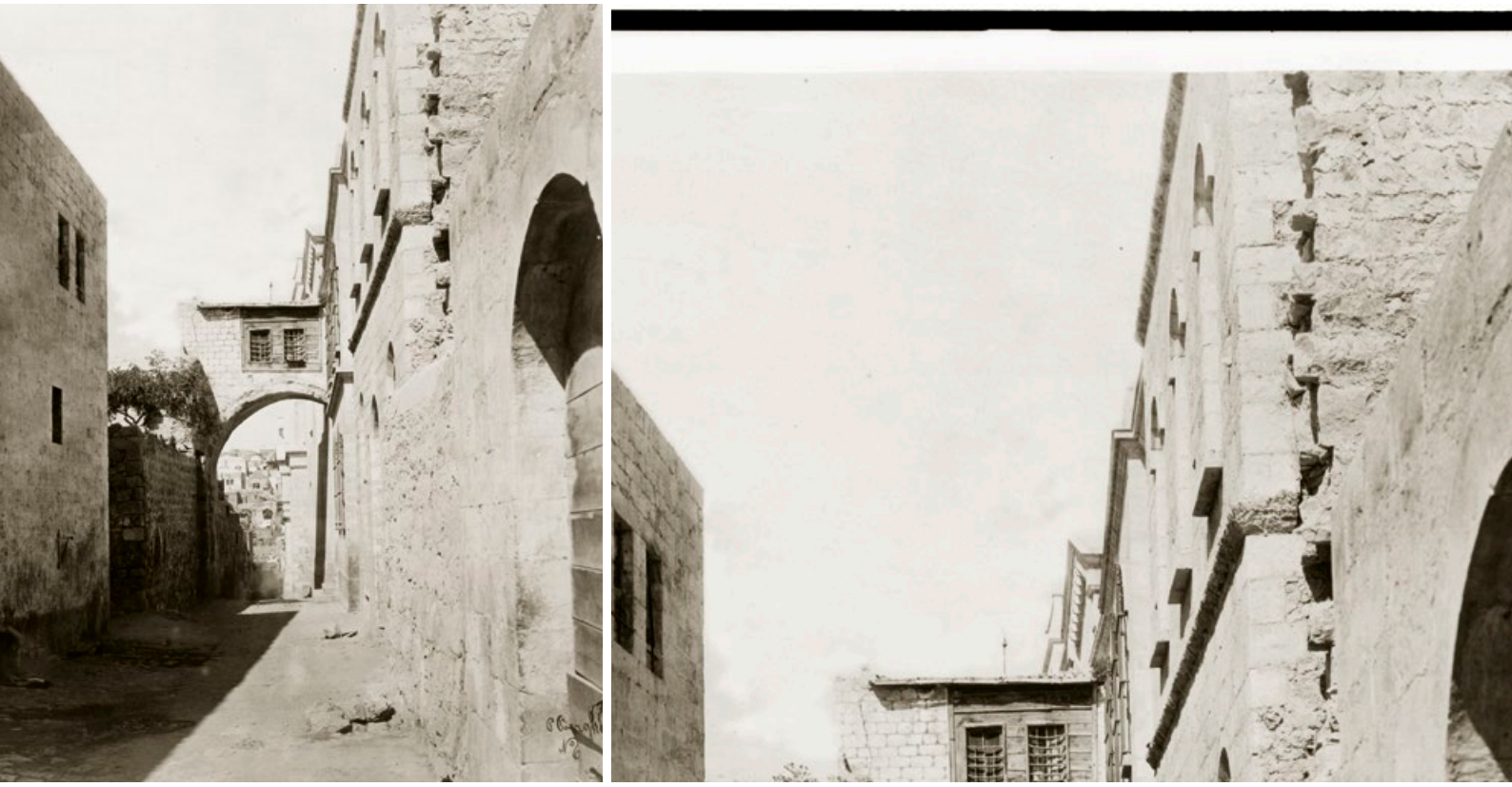
We passed under the "Ecce Homo Arch," and saw the very window from which Pilate's wife warned her husband to have nothing to do with the persecution of the Just Man. This window is in an excellent state of preservation, considering its great age.

They showed us where Jesus rested the second time, and where the mob refused to give Him up, and said, "Let his blood be upon our heads, and upon our children's children forever." The French Catholics are building a church on this spot, and with their usual veneration for historical relics, are incorporating into the new such scraps of ancient walls as they have found there. Further on, we saw the spot where the fainting Saviour fell under the weight of His cross. A great granite column of some ancient temple lay there at the time, and the heavy cross struck it such a blow that it broke in two in the middle. Such was the guide's story when he halted us before the broken column.

We crossed a street, and came presently to the former residence of Saint Veronica. When the Saviour passed there, she came out, full of womanly compassion, and spoke pitying words to Him, undaunted by the hootings and the threatenings of the mob, and wiped the perspiration from his face with her handkerchief. We had heard so much of Saint Veronica, and seen her picture by so many masters, that it was like meeting an old friend unexpectedly to come upon her ancient home in Jerusalem. The strangest thing about the incident that has made her name so famous, is, that when she wiped the perspiration away, the print of the Saviour's face remained upon the handkerchief, a perfect portrait, and so remains unto this day. We knew this, because we saw this handkerchief in a cathedral in Paris, in another in Spain, and in two others in Italy. In the Milan cathedral it costs five francs to see it, and at St Peter's, at Rome, it is almost impossible to see it at any price. No tradition is so amply verified as this of Saint Veronica and her handkerchief.

At the next corner we saw a deep indention in the hard stone masonry of the corner of a house, but might have gone heedlessly by it but that the guide said it was made by the elbow of the Saviour, who stumbled here and fell. Presently we came to just such another indention in a stone wall. The guide said the Saviour fell here, also, and made this depression with His elbow.

There were other places where the Lord fell, and others where He rested; but one of the most curious landmarks of ancient history we found on this morning walk through the crooked lanes that lead toward Calvary, was a certain stone built into a house—a stone that was so seamed and scarred that it bore a sort of grotesque resemblance to the human face. The projections that answered for cheeks were worn smooth by the passionate kisses of generations of pilgrims from distant lands. We asked "Why?" The guide said it was because this was one of "the very stones of Jerusalem" that Christ mentioned when He was reproved for permitting the people to cry "Hosannah!" when He made His memorable entry into the



THE ECCE HOMO ARCH—THEN AND NOW. Photograph taken of the arch around the time of Twain's visit in 1867 and how the arch appears today. The arch marks the beginning of the famous "Via Dolorosa" pilgrim walk in Old Jerusalem. In Christian tradition, this is the place where Christ began His walk to the crucifixion, but the arch was actually built by Emperor Hadrian almost 100 years later.

city upon an ass. One of the pilgrims said, "But there is no evidence that the stones did cry out—Christ said that if the people stopped from shouting Hosannah, the very stones would do it." The guide was perfectly serene. He said, calmly, "This is one of the stones that would have cried out." It was of little use to try to shake this fellow's simple faith—it was easy to see that.

The mighty Mosque of Omar, and the paved court around it, occupy a fourth part of Jerusalem. They are upon Mount Moriah, where King Solomon's Temple stood. This mosque is the holiest place the Mohammedan knows, outside of Mecca. Up to within a year or two past, no Christian could gain admission to it or its court for love or money. But the prohibition has been removed, and we entered freely for bucksheesh.

I need not speak of the wonderful beauty and the exquisite grace and symmetry that have made this mosque so celebrated—because I did not see them. One can not see such things at an instant glance—one frequently only finds out how really beautiful a really beautiful woman is after considerable acquaintance with her; and the rule applies to Niagara Falls, to majestic mountains and to mosques—especially to mosques.

The great feature of the Mosque of Omar is the prodigious rock in the centre of its rotunda. It was upon this rock that Abraham came so near offering up his son Isaac—this, at least, is authentic—it is very much more to be relied on than most of the traditions, at any rate. On this rock, also, the angel stood and threatened Jerusalem, and David persuaded him to spare the city. Mahomet was well acquainted with this stone. From it he ascended to heaven. The stone tried to follow him, and if the angel Gabriel had not happened by the merest good luck to be there to seize it, it would have done it. Very few people have a grip like Gabriel—the prints of his monstrous fingers, two inches (5 cm) deep, are to be seen in that rock today.

This rock, large as it is, is suspended in the air. It does not touch anything at all. The guide said so. This is very wonderful. In the place on it where Mahomet stood, he left his footprints in the solid stone. I should judge that he wore about eighteens. But what I was going to say, when I spoke of the rock being suspended, was, that in the floor of the cavern under it they showed us a slab which they said covered a hole which was a thing of extraordinary interest to all Mohammedans, because that hole leads down to perdition, and every soul that is transferred from thence to Heaven must pass up through this orifice.

For several ages no woman has been allowed to enter the cavern where that important hole is. The reason is that one of the sex was once caught there blabbing everything she knew about what was going on above ground, to the rapscallions in the infernal regions down below. She carried her gossiping to such an extreme that nothing could be kept private—nothing could be done or said on earth but every body in perdition knew all about it before the sun went down. It was about time to suppress this woman's telegraph, and it was promptly done. Her breath subsided about the same time.

The inside of the great mosque is very showy with variegated marble walls and with windows and inscriptions of

PHOTO: GARY WEBSTER | LIBRARY OF CONGRESS

MOSQUE OF OMAR, CIRCA 1870 It was a common mistake in the nineteenth century to refer to the Dome of the Rock, initially completed in 691, as the Mosque of Omar, which was a separate tower built in 1193. Omar was one of the most influential Muslims in history; he cleared the area of the Temple Mount, believing Muhammad ascended to heaven from that location. But this shrine was never dedicated to Omar.

ST VERONICA, BY HANS MEMLING (1433–94) St Veronica holds a handkerchief with the image of Christ left on it, apparently after wiping His face. Twain's viewing of a number of this same relic in various European churches reveals the bizarre extent the gathering of holy relics reached in the Middle Ages.

elaborate mosaic. The Turks have their sacred relics, like the Catholics. The guide showed us the veritable armour worn by the great son-in-law and successor of Mahomet, and also the buckler of Mahomet's uncle. The great iron railing which surrounds the rock was ornamented in one place with a thousand rags tied to its open work. These are to remind Mahomet not to forget the worshippers who placed them there. It is considered the next best thing to tying threads around his finger by way of reminders.

Just outside the mosque is a miniature temple, which marks the spot where David and Goliah used to sit and judge the people. (A pilgrim informs me that it was not David and Goliah, but David and Saul. I stick to my own statement—the guide told me, and he ought to know.)

Everywhere about the Mosque of Omar are portions of pillars, curiously wrought altars, and fragments of elegantly carved marble—precious remains of Solomon's Temple. These have been dug from all depths in the soil and rubbish

PHOTO: THE YORCK PROJECT—DIRECTMEDIA PUBLISHING—WIKIPEDIA | GARY WEBSTER

WESTERN WALL, CIRCA 1880 When Rome destroyed the Second Temple in AD 70, only the outer walls remained standing. For the Jews, this remnant of the sacred building became the holiest place in Jewish life. During the more than 1000 years that Jerusalem was under Muslim rule, the Arabs used the wall as a garbage dump, so as to humiliate Jews who visited it. Much of the wall remained buried until after the Six Day War of 1967, with sections still being uncovered in ongoing excavations within the Western Wall tunnels.

of Mount Moriah, and the Moslems have always shown a disposition to preserve them with the utmost care. At that portion of the ancient wall of Solomon's Temple which is called the Jew's Place of Wailing, and where the Hebrews assemble every Friday to kiss the venerated stones and weep over the fallen greatness of Zion, anyone can see a part of the unquestioned and undisputed Temple of Solomon, the same consisting of three or four stones lying one upon the other, each of which is about twice as long as a seven-octave piano, and about as thick as such a piano is high.

But, as I have remarked before, it is only a year or two ago that the ancient edict prohibiting Christian rubbish like ourselves to enter the Mosque of Omar and see the costly marbles that once adorned the inner Temple was annulled. The designs wrought upon these fragments are all quaint and peculiar, and so the charm of novelty is added to the deep interest they naturally inspire. One meets with these venerable scraps at every turn, especially in the neighbouring Mosque el Aksa, into whose inner walls a very large number of them are carefully built for preservation. These pieces of stone, stained and dusty with age, dimly hint at a grandeur we have all been taught to regard as the princeliest ever seen on earth; and they call up pictures of a pageant that is familiar to all imaginations—camels laden with spices and treasure—beautiful slaves, presents for Solomon's harem—a long cavalcade of richly caparisoned beasts and warriors—and Sheba's Queen in the van of this vision of "Oriental magnificence." These elegant fragments bear a richer interest than the solemn vastness of the stones the Jews kiss in the Place of Wailing can ever have for the heedless sinner.

Down in the hollow ground, underneath the olives and the orange trees that flourish in the court of the great Mosque, is a wilderness of pillars—remains of the ancient Temple; they supported it. There are ponderous archways down there, also, over which the destroying "plough" of prophecy passed harmless. It is pleasant to know we are disappointed, in that we never dreamed we might see portions of the actual Temple of Solomon, and yet experience no shadow of suspicion that they were a monkish humbug and a fraud.

PHOTO: BERGHEIM— LIBRARY OF CONGRESS

ABOVE, THE POOL OF BETHESDA The desire to attribute a connection to Christ of every rock in Jerusalem led to many areas being incorrectly identified. Christian pilgrims of the 19th century identified this, now known as the Birket Israel cistern, as the Pool of Bethesda. The real pool was not discovered until 1888, 20 years after Twain's tour, and even then was not accurately identified for another 100 years.

CENTRE, INTERIOR OF THE DOME OF THE ROCK, CIRCA 1867–1899 The Dome, as the name suggests, is built about a rock that may have once stood in the centre of Solomon's Temple. For Jews, it is the rock upon which Abraham prepared to sacrifice his son Isaac; For Muslims, it is the rock from which Muhammad ascended in his night journey to heaven.

We are surfeited with sights. Nothing has any fascination for us, now, but the Church of the Holy Sepulchre. We have been there every day, and have not grown tired of it; but we are weary of everything else. The sights are too many. They swarm about you at every step; no single foot of ground in all Jerusalem or within its neighbourhood seems to be without a stirring and important history of its own. It is a very relief to steal a walk of a hundred yards without a guide along to talk unceasingly about every stone you step upon and drag you back ages and ages to the day when it achieved celebrity.

It seems hardly real when I find myself leaning for a moment on a ruined wall and looking listlessly down into the historic pool of Bethesda. I did not think such things could be so crowded together as to diminish their interest. But in serious truth, we have been drifting about, for several days, using our eyes and our ears more from a sense of duty than any higher and worthier reason. And too often we have been glad when it was time to go home and be distressed no more about illustrious localities.

Our pilgrims compress too much into one day. One can gorge sights to repletion as well as sweetmeats. Since we breakfasted, this morning, we have seen enough to have furnished us food for a year's reflection if we could have seen the various objects in comfort and looked upon them deliberately. We visited the pool of Hezekiah, where David saw Uriah's wife coming from the bath and fell in love with her.

We went out of the city by the Jaffa Gate, and of course were told many things about its Tower of Hippicus.

We rode across the Valley of Hinnom, between two of the Pools of Gihon, and by an aqueduct built by Solomon, which still conveys water to the city. We ascended the Hill of Evil Counsel, where Judas received his 30 pieces of silver, and we also lingered a moment under the tree a venerable tradition says he hanged himself on.

We descended to the canon again, and then the guide began to give name and history to every bank and boulder we came to: "This was the Field of Blood; these cuttings in the rocks were shrines and temples of Moloch; here they sacrificed children; yonder is the Zion Gate; the Tyropean Valley, the Hill of Ophel; here is the junction of the Valley of Jehoshaphat—on your right is the Well of Job." We turned up Jehoshaphat. The recital went on. "This is the Mount of Olives"; "this is the Hill of Offense"; "the nest of huts is the Village of Siloam"; "here, yonder, everywhere, is the King's Garden"; "under this great tree Zacharias, the high priest, was murdered"; "yonder is Mount Moriah and the Temple wall"; "the tomb of Absalom"; "the tomb of Saint James"; "the tomb of Zacharias"; "beyond, are the Garden

RIGHT: EAST JERUSALEM, CIRCA 1860–1880 Sites in the life of Christ to the east of Jerusalem: **1.** Church of the Tomb of the Virgin, where Christian tradition holds that Mary, Jesus' mother, was buried **2.** Grotto of the Agony, where it is believed the disciples slept while Jesus prayed. **3.** Garden of Gethsemane, where Jesus went with His disciples to pray the night before He was crucified. (Despite the belief that these trees were the very ones beneath which Jesus agonised before His crucifixion, contemporary historian Flavius Josephus recorded that all the trees around Jerusalem were cut down by the Romans in the siege, before they captured the city in AD 70.) **4.** Mount of Olives.

of Gethsemane and the tomb of the Virgin Mary"; "here is the Pool of Siloam, and . . . ."

We said we would dismount, and quench our thirst, and rest. We were burning up with the heat. We were failing under the accumulated fatigue of days and days of ceaseless marching. All were willing.

The Pool is a deep, walled ditch, through which a clear stream of water runs, that comes from under Jerusalem somewhere, and passing through the Fountain of the Virgin, or being supplied from it, reaches this place by way of a tunnel of heavy masonry. The famous pool looked exactly as it looked in Solomon's time, no doubt, and the same dusky, Oriental women, came down in their old Oriental way, and carried off jars of the water on their heads, just as they did 3000 years ago, and just as they will do fifty thousand years hence if any of them are still left on earth.

We went away from there and stopped at the Fountain of the Virgin. But the water was not good, and there was no comfort or peace anywhere, on account of the regiment of boys and girls and beggars that persecuted us all the time for bucksheesh.

We entered the Garden of Gethsemane, and we visited the Tomb of the Virgin, both of which we had seen before. It is not meet that I should speak of them now. A more fitting time will come. I cannot speak now of the Mount of Olives or its view of Jerusalem, the Dead Sea and the mountains of Moab; nor of the Damascus Gate or the tree that was planted by King Godfrey of Jerusalem. One ought to feel pleasantly when he talks of these things.

We are at home again. We are exhausted. The sun has roasted us, almost. We have full comfort in one reflection, however. Our experiences in Europe have taught us that in time this fatigue will be forgotten; the heat will be forgotten; the thirst, the tiresome volubility of the guide, the persecutions of the beggars—and then, all that will be left will be pleasant memories of Jerusalem, memories we shall call up with always increasing interest as the years go by, memories which some day will become all beautiful when the last annoyance that incumbers them shall have faded out of our minds never again to return.

Schoolboy days are no happier than the days of after life, but we look back upon them regretfully because we have forgotten our punishments at school, and how we grieved when our marbles were lost and our kites destroyed—because we have forgotten all the sorrows and privations of that canonized epoch and remember only its orchard robberies, its wooden sword pageants and its fishing holydays.

We are satisfied. We can wait. Our reward will come. To us, Jerusalem and today's experiences will be an enchanted memory a year hence—memory which money could not buy from us. ◆

PHOTOS: BERGHEIM — LIBRARY OF CONGRESS

CANAANITE INSCRIPTION from the 12th century BC, discovered at Lachish in 2014. It is the first Late Bronze inscription in Canaan discovered in more than 30 years.

PHOTO: COURTESY OF YOSSI GARFINKEL, HEBREW UNIVERSITY

ALPHABET ORIGINS

LACHISH, ISRAEL

A potsherd (left) slightly larger than a business card found in the ruins of a Late Bronze Age temple at Lachish in southern Israel has yielded a few tantalising letters from a twelfth century BC alphabet. The inscription—three lines containing nine early Semitic letters etched into a clay jar—is the first Canaanite inscription found in a Late Bronze Age context in more than 30 years.

The first line reads, *pkl;* the second, *spr* (the Semitic root for "scribe"); but the third has two letters of uncertain meaning. The text includes the earliest dateable examples of the letters *kaf* (precursor to the Latin letter K); *samekh* (S) and *resh* (R). Samekh had never before been found in early Canaanite inscriptions.

The Canaanites began to develop their alphabet around 1800 BC, more than 1000 years after cuneiform writing first appeared in Mesopotamia.

Professor Yosef Garfinkel of the Hebrew University, one of the co-authors of a report published in the *Bulletin of the American Schools of Oriental Research,* called the innovation of the alphabet "the greatest intellectual contribution of the land of Israel to global culture," saying, "If there hadn't been an alphabet, there wouldn't have been a Bible."

Archaeologists from Tel Aviv University, Hebrew University and Tennessee's Southern Adventist University who studied the potsherd inscription, said that it was too fragmentary to determine what it might say, but its discovery in a temple complex suggests the text may have been dedicatory. Regardless, the letters themselves provide crucial information about the development of the proto-Canaanite alphabet, the precursor to the Hebrew, Greek and Latin alphabets.

ROMAN TOILETS BAD FOR PUBLIC HEALTH?

BASEL, SWITZERLAND At its zenith, the Roman Empire spanned three continents, encircled the Mediterranean and was home to one-fifth of the planet's population. The Romans brought roads, bridges and, perhaps most importantly, sanitation. But a new study of ancient faeces casts doubt on just how effective the Roman sanitation system was at improving public health.

"I think it's a good piece of work," says Jürg Utzinger, an epidemiologist at the University of Basel in Switzerland who was not involved in the study. "It's not an easy task, because we're talking about the examination of faecal material dating back thousands of years."

In terms of sanitation, the Roman Empire seemed to be doing a lot of things right: It had public bathing facilities, public toilets and ordinances dictating how waste should be disposed of. Rome itself had an impressive sewage system—the famed aqueducts. "In the Roman Empire, where they improved sanitation, I would've expected a certain decline in parasitic infections," Utzinger said.

But that's not what the new study found. Piers Mitchell, a paleopathologist at the University of Cambridge in the UK, combed through previous studies from more than 50 archaeological sites around the Mediterranean to get a sense of what parasites were living in, and on, humans before, and after, the Romans took over. Many of these studies relied on microscope and chemical or DNA tests to detect parasites and their eggs in soil from grave sites and public latrines. Mitchell focused his analysis on these sites because they contained fossilised faeces, known as coprolites, which may retain parasite eggs and DNA for thousands of years. Using this evidence, he outlined the geographic range of multiple parasites.

—Sciencemag.org

PHOTO: KEITH BINNS—ISTOCKPHOTO.COM

PHOTO: JAROMIR KREJCI—CZECH INSTITUTE OF EGYPTOLOGY

5TH DYNASTY QUEEN UNEARTHED

ABUSIR, EGYPT A previously unknown Old Kingdom queen named Khentkaus III has been discovered in a small cemetery to the south-east of King Neferefre's pyramid complex by a team from the Czech Institute of Egyptology. She had been buried with four copper tools and 23 limestone vessels. Inscriptions in the tomb list the queen's titles as "Mother of the King," and "Wife of the King," who was possibly pharaoh Neferefre.

"If we can assume that the queen was buried during the time of King Nyuserre [2445–2421 BC], based on a seal that bears his name that was found on the tomb, we could say that Khentkaus III is the mother of King Menkauhore who was the successor of Nyuserre," team member Jaromir Krejci told the *Luxor Times*.

SUDAN'S MAJOR DISCOVERY

KHARTOUM, SUDAN A team of Italian and Russian archaeologists has made what the Sudan Antiquities Service is calling the country's most important discovery of the past decade. It is the discovery of a basalt ritual altar, a base for a sacred boat, and a hieroglyphic inscription uncovered at Abu Erteila, around 200 km (120 miles) north of Khartoum, and sheds new light on the Nubian civilisation that existed between the first centuries BC and AD.

Archaeologists are still studying the Egyptian hieroglyphic inscriptions, and they have already identified the names of the royal couple King Natakamani and Queen Amanitore who ruled during the Golden Age of the Meroitic civilisation that developed on the Nile.

The alter was found in the ruins of a temple that appeared to have been destroyed by fire. The base for a sacred boat was located in the central hall of the building, which harboured a Nubian deity periodically placed on a boat for a ritualistic procession.

The artefacts are extremely important for a better understanding of the Meroitic world—which is still quite unknown—and its relations with the nearby Egyptian civilisation.

—AGI

ICEMAN'S MATERNAL GENETIC LINE NOW EXTINCT

ROME, ITALY The maternal bloodline of Ötzi, the Iceman of the Austrian Alps (see ARCHAEOLOGICAL DIGGINGS June/July 2014) is extinct, according to a recently published study on the DNA of *Helicobacter pylori,* a pathogen extracted from his stomach. Ötzi, so-called, was discovered in a melting glacier high in the Austrian Alps in 1991, and is now the centre of the South Tyrol Museum of Archaeology, in Bolzano, near where he was found.

While a 2012 study showed that Ötzi's paternal genetic line is still present in modern-day populations, studies of mitochondrial DNA (transmitted solely via the mother to her offspring) by a European Academy of Bozen/Bolzano (EURAC) research team, in collaboration with the Sapienza University of Rome and the University of Santiago de Compostela, now conclude that the Iceman's maternal line is now extinct. It remains to be explained why Ötzi's maternal lineage has disappeared, while his paternal lineage continues in Europe.

—EURAC

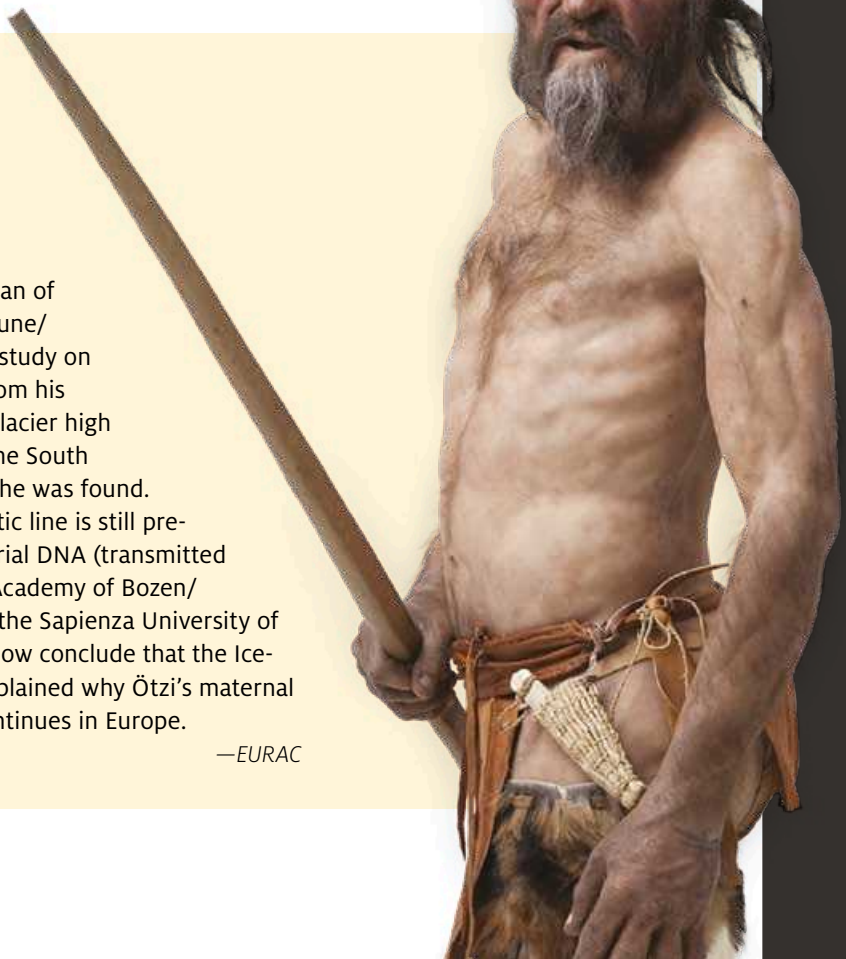


PHOTO: KENNIS, SOUTH TYROL MUSEUM OF ARCHAEOLOGY

BIBLE INSCRIPTION MOSAIC

ADANA, TURKEY A large, well preserved mosaic bearing a quotation from the Bible has been unearthed on private property in Turkey's Adana province. According to archaeologists, the Eastern Roman-era mosaic dates to between the fifth and sixth centuries AD. The 15 × 18 m (50 × 60 ft) mosaic, which was likely the floor of a residence, features 16 different animal figures including a snake, lion, sheep, leopard, wolf, goat and bull. Wild and domestic animals are portrayed as sleeping and being fed together or eating each other's food. An inscription in Greek reads, "The wolf and the lamb will feed together, the lion will eat straw like the ox and dust will be the serpent's food. They will neither harm nor destroy on my holy mountain, says the Lord," lifted from the book of Isaiah (65:25), describing heaven.

It has been brought to the laboratory of a new museum complex under construction at the historical National Textile Factory in Adana, where it continues to be studied and on display. Said Nedim Dervişoğlu, deputy head of the Adana Museum, pointing out the small number of existing mosaics in Turkey, "It is an important piece for our museum."

BIGGER THAN YOU THINK

KNOSSOS, CRETE

Excavations of the ancient city of Knossos have revealed that during the Iron Age the city was likely nearly three times larger than previously thought. Discoveries made there by the University of Cincinnati and the Knossos Urban Landscape Project suggest that Knossos was as much as triple the size of previous estimates. This suggests that not only did it recover from its Bronze Age collapse but that it rapidly grew and thrived as a cosmopolitan hub of the Mediterranean.

Over the past decade, the Knossos Urban Landscape Project has recovered many ceramics and artefacts dating back to the Iron Age. The relics were spread over an extensive area, suggesting growth in the size of the settlement during the Iron Age, as well as growth in the quantity and quality of its imports coming from Cyprus, Greece, Iran, Italy, Egypt, Sardinia and the western Mediterranean.

Minoan culture on Crete ended around the fifteenth century BC and most archaeological work on the island has been focused on discovering the remnants that it left behind. But this project looked at newer artefacts, instead. They reveal that the city recovered from the collapse of its socio-political system around 1200 BC and thrived during the Iron Age that followed the Bronze Age.

—Erin Blakemore, Smithsonian.com

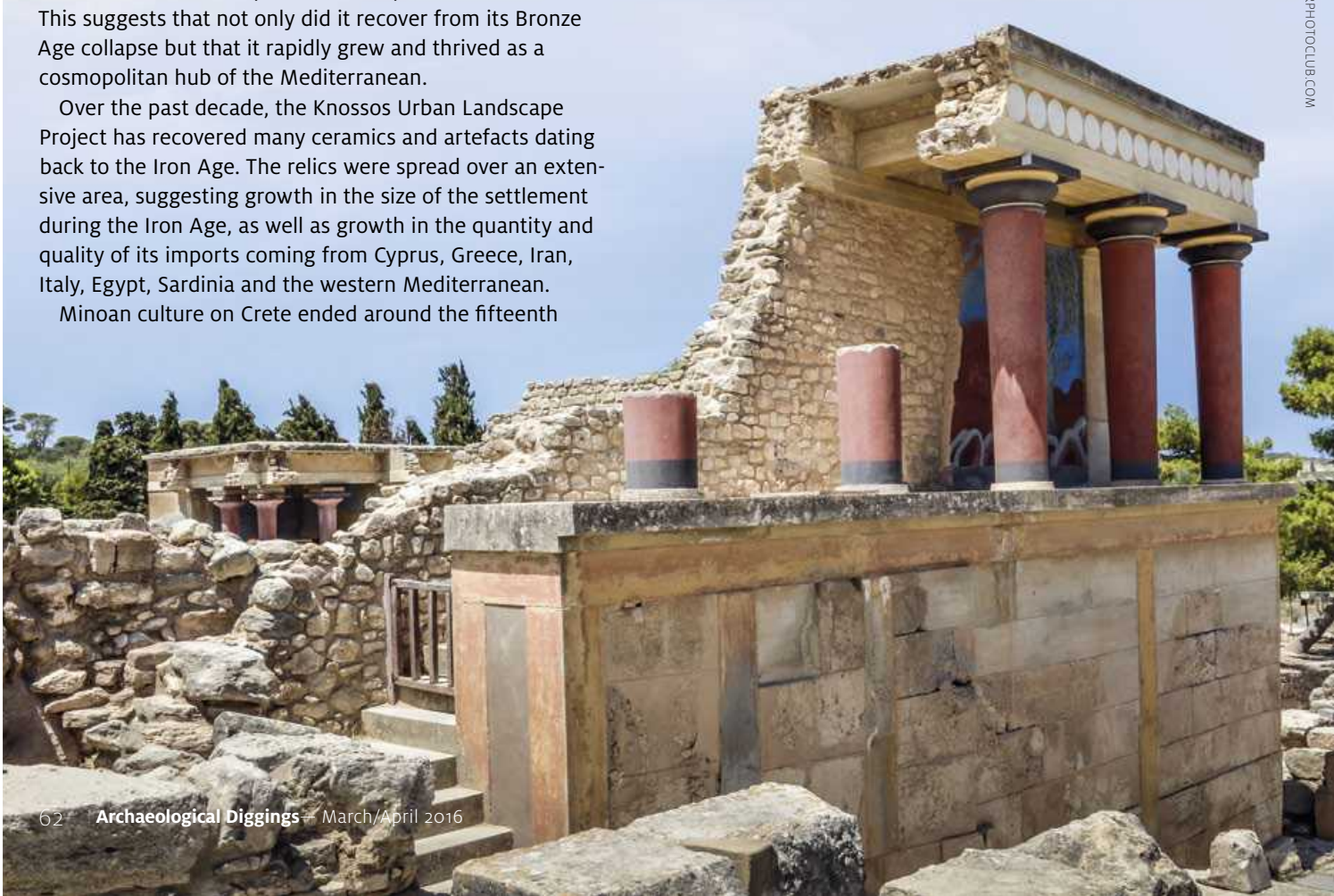


PHOTO: COSTY FRANCU—DOLLARPHOTOCLUB.COM

PHOTO: MIN PROJECT—MATJAZKACICNIK

MYTHICAL TOMB OF OSIRIS UNCOVERED

LUXOR, EGYPT An enormous, ancient reproduction of the mythical Tomb of Osiris as described by Egyptian legend, complete with multiple shafts and chambers, has been discovered in the necropolis of Sheikh Abd el-Qurna, on the west bank at Thebes, Egypt. The tomb complex contains a carving of Osiris and a room with a wall relief depicting a demon holding knives.

According to the Spanish news agency EFE, the tomb embodies all the features of the tomb of Osiris, as told in ancient Egyptian legends, and is a smaller version of the design of the Osireion, built under Egyptian pharaoh Seti I in the city of Abydos, near Luxor. Researchers date the complex to the Twenty-fifth (760–656 BC) or Twenty-sixth Dynasties (672–525 BC), based on a comparison of similar tombs that contain Osirian elements.

The complex consists of a large hall supported by five pillars. The structure has a staircase from the north wall of the main room, leading down to the funerary complex, where there is a carving of Osiris, god of the dead, in the middle of a central vaulted temple.

To the west of the central temple is the funerary room with the reliefs of demons holding knives. Opposite the statue of Osiris is a staircase with a 9 m (29.5 ft) shaft leading to another chamber. Inside this chamber is a second shaft that descends a further 6 m (19.6 ft) into two more rooms, currently full of debris.

Part of the tomb was initially discovered by archaeologist Philippe Virey in the 1880s and some attempts were made to sketch out the main structure in the twentieth century, however, it is only recently that the full extent of the structure has been uncovered.

EGYPTIAN STATUES REVEALED IN ANCIENT SHRINES

ASWAN, EGYPT Six rock-cut statues have been discovered within Eighteenth Dynasty shrines in Egypt.

The 3400-year-old statues were found at Gebel el-Silsila, a site north of Aswan known for its stone quarries, alongside the Nile. Blocks used in building almost all of ancient Egypt's great temples were quarried there. The statues were carved within two of the 32 shrines erected by the officials in charge of quarrying the stone. The shrines are located about a kilometre south of Gebel el-Silsila's famous rock-cut temple known as the Speos of Horemheb.

At the rear of the shrine, within a niche, are two life-size statues, a male and a female, seated on a couch in an embrace. The male figure, and likely owner of the shrine, is portrayed with enlarged and protruding ears, large nose and lips, and sunken eyes. His arms are crossed over his chest in the so-called Osirian position. Portrayed with equally pronounced facial features, the female statue embraces the male, with one arm placed on his shoulder.

—Discovery News.

Two 3400-year-old statues found at Gebel el-Silsila, Egypt. The identity of the couple is unknown, as no such information was preserved within the hieroglyphic text of the location.

Within Shrine 30, the best preserved of the shrines at Gebel el Silsila, archaeologists found these four well-preserved statues, two male and two females, seated in a niche.

PHOTO: THE GEBEL EL SISILA PROJECT 2015

FRIEZE OF STRIDING LIONS, (522–465 BC) from the palace of Persepolis, on display in the Oriental Institute Museum, Chicago.

PHOTO: ORIENTAL INSTITUTE MUSEUM, UNIVERSITY OF CHICAGO

PERSEPOLIS ON DISPLAY IN CHICAGO

CHICAGO, USA

A new exhibition at the Oriental Institute Museum of the University of Chicago will give visitors a rare glimpse inside the ancient city of Persepolis. "Persepolis: Images of an Empire," which opened in October 2015, runs until September 11 this year. The multi-media presentation uses vintage aerial photographs and new satellite imagery, along with 3D models, that document an imperial complex of palaces constructed by the Persian kings Darius, Xerxes and Artaxerxes I and III, who ruled between 522 and 338 BC, in today's southwest Iran.

These Persian kings were the greatest powers in the ancient world, ruling the entire Middle East and battling for supremacy against their rivals, the Greeks. This half-century conflict, culminating in battles with Alexander the Great, has been the subject of popular interest in films such as *300* (see Richard Stone's "Xerxes' Greek Campaign," page 20).

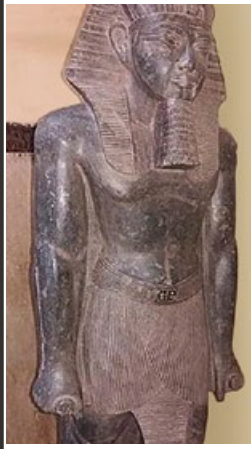
The tremendous political and economic power of the Persian kings was expressed by the scale of the architecture at Persepolis, especially the monumental audience halls with grand stairways decorated with finely carved images of people from throughout the kingdom carrying precious gifts to their Persian overlords.

Persepolis was excavated from 1931 to 1939 by Oriental Institute archaeologists Ernst Herzfeld and Erich Schmidt. The team documented the site in dramatic black-and-white views of the architecture and the rugged surrounding terrain. The photographs capture the forest of columns that tower over the site's raised terrace, which supported grand ceremonial audience halls, palaces, great stone portals, and carved scenes of the kings and their courtiers.

"[These photographs] are hauntingly beautiful windows to the past," says exhibit curator Dr Kiersten Neumann. "They present a promise of the opulence and lavishness that was Persepolis, yet they also capture its solitude and melancholy—the resolute ruins of a once equally determined empire."

Approximately 3700 photographs were taken during the Oriental Institute's expedition. From 1937 to 1939 the expedition used a Waco cabin biplane, christened "Friend of Iran," to document the site and the surrounding region. This was an important technological advance: From the air, the archaeologists could see the outlines of buildings that were then buried under the sand. As excavator Schmidt wrote, "In thirteen hours flying over the environs of Persepolis we succeeded in mapping more than four hundred ancient sites . . . a task of years if carried out on the ground."

—Newswise



KING AMENHOTEP III STATUE ACCIDENTLY DISCOVERED IN EDFU

ASWAN, EGYPT A granite statue of Eighteenth Dynasty king Amenhotep III has been found by chance in a house in Al-Nakhl village in Edfu, Aswan Nevine El-Aref. Edfu police recovered the object on behalf of Egypt's antiquities authorities, in December 2015, during a search for weapons and drugs. An investigation as to where the statue came from continues.

The statue, which depicts King Amenhotep III standing and wearing a short skirt and a nemes headdress, will eventually go on public display in the Luxor Museum. Carved from black granite, its middle reverse side is engraved with hieroglyphic text, with its base decorated with the king's various titles.

—Jessica Saraceni, Ahram Online

LETTERS Thank you to all involved in producing such a fantastic magazine! I don't think enough people get praised for the effort they put into the work they do. It is an amazing job you all do to have lasted this long and be still going strong. I take my hat off to you all.

Archaeology is not everyone's cup o' tea, but every year it seems to attract more to the mysteries surrounding history. It's just amazing how they did things, with the type of tools they used and the knowledge they had.

I have a copy of every issue, right from the beginning of its existence.

—Bruce Byrnes, Cranebrook, NSW

Since first discovering your magazine back in 2004, I've watched it progress to the wonderfully colourful and professional magazine of today. Over the years I've read many books about all things old. These days I find it hard to find the time to read so much, but I always manage to get through a copy of DIGGINGS. I think this is because you've kept it simple enough to understand and brief enough to hold the interest of most readers.

—Grant Fowler, New Plymouth, NZ

SUMMER AT THE BRITISH MUSEUM A must-see for visitors to Britain this summer is a British Museum exhibition, "Sunken Cities: Egypt's Lost Worlds," which runs from May 9 to November 27.

The exhibition highlights two recently rediscovered cities of ancient Egypt and tells their stories, revealing stunning objects ranging from magnificent colossal statues to intricate gold jewellery.

The stars of the exhibition are the submerged cities of Thonis-Heracleion and Canopus, just off the mouth of the Nile. Archaeologist Franck Goddio and his team, who made the discoveries, have made numerous underwater discoveries over the past 20 years, using the latest technologies.

Named after the Greek hero Heracles, Thonis-Heracleion was one of Egypt's most important commercial centres for trade with the Mediterranean world and, with Canopus, was a major centre for the worship of Egyptian gods.

FREE DIGGINGS CAP!
All published letters will receive a DIGGINGS cap, so please include a postal address, particularly in emailed letters.

CONTACT US Have kudos or a question? Then write and tell us: The Editor, Diggings, Locked Bag 1115, Wahroonga NSW 2076, Australia, or email editor@diggings.com.au. Include your full name and address (and email, if possible). Keep your letter brief—around 100 words or so. Letters may be edited for clarity and length.

EVENTS

2016 DIGGINGS SEMINARS

ARCHAEOLOGICAL DIGGINGS editor Gary Webster's "Ancient Mysteries Reveal the Future" seminar schedule:

Stanmore, Sydney, Rydges Hotel, Missenden Rd, Camperdown. Friday, April 8, 7:30pm–9:30pm
Bookings ph 0467 183 227

Hornsby, Sydney, Event Cinemas, Westfield Shopping Centre, Saturday, April 9, 3:30–5:30; 6:00–8:00 (rpt)
Bookings ph 1800 887 113

Coorparoo,Brisbane, East Leagues Club, Coorparoo, Wednesday, April 27, 7pm

Haymarket, Sydney CBD, Saturday, June 11, 2pm

Karratha, WA, Friday, August 12, 7pm

Apia, Samoa, Friday, August 19, 7pm

For more information regarding these seminars or to have one in your area, please contact DIGGINGS and we will do our best to accommodate your request.

Other non-DiGGINGS-sponsored but archaeology-related events you might be interested in include:

BRISBANE, QLD **The Diggings Club** meets on the second Sunday of each month at 1 pm in the Central City Library, 266 George Street, Brisbane. For further information, phone Veronica Mason on (07) 3219 3097.

SYDNEY, NSW **Macquarie University** holds regular seminars and one-off events on ancient world studies. For more information, run an internet search of "Macquarie University ancient world history seminar."

GOLD COAST, QLD **The Pharos Club** meets in Southport on the first Saturday of each month at 1 pm. For more information, please contact Maureen Hughes on (07) 5531 1394.

ADELAIDE, SA **The Ancient Egypt Study Group** meets on the first Tuesday of each month at 7.30 pm in Clarence Gardens, Adelaide. **The Hieroglyphs Study Group** meets on the third Tuesday of each month. For further details, please phone (08) 8276 7945.

ALPHABET SOUP

Each clue is contained within a DIGGINGS feature. Once you have deciphered the word, locate it in the word finder puzzle. Good luck!

CLUES

1 Temple Mount
LOPHE _ _ _ _ _

2 Eastern extent of Roman Empire
TIKAUW _ _ _ _ _ _

3 Greek marine
LITEHOP _ _ _ _ _ _ _

4 birth place of Trajan
PAINS _ _ _ _ _

5 northern frontier of Rome
NUBDAE _ _ _ _ _ _

6 . the crested Ibis
AKH _ _ _

7 Lydian capital
SISARD _ _ _ _ _ _

8 Persian governor
RAPSAT _ _ _ _ _ _

9 Egyptian surveying tool
ABY _ _ _

10 Israel Antiquities Authority
AIA _ _ _

11 king and conqueror
SEXXER _ _ _ _ _ _

12 creative life force or soul
AK _ _

13 Cyrus's tomb
ASARGADAEP _ _ _ _ _ _ _ _ _

14 Middle Eastern gratuity
CHEESBHUKS _ _ _ _ _ _ _ _ _

15 between Europe and Asia
ONSHELLPET _ _ _ _ _ _ _ _ _

16 Acropolis of Africa
TEARG MBWEZIBA
_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

17 stone cap atop a pyramid
AIMPYRIDON _ _ _ _ _ _ _ _ _

18 ancient historian #1
EHROOSTUD _ _ _ _ _ _ _ _ _

19 ancient historian #2
PHONOXEN _ _ _ _ _ _ _ _

20 name of ancient Turkey
IALOTANA _ _ _ _ _ _ _

21 Jewish conqueror of Canaan
UASHOJ _ _ _ _ _

B	A	B	Y	O	L	I	A	P	E	R	T	R	A	S	I	Z	B	A	P	B
X	E	N	O	P	X	G	R	A	E	T	O	P	H	A	L	I	E	B	Y	U
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R	E	S	K	H	X	E	N	O	P	H	O	N	H	N	O	A	I	Y	M	S
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S	B	A	Y	B	O	L	H	E	S	A	T	R	O	P	D	A	N	U	B	E
E	A	R	M	E	R	K	H	E	T	M	S	A	R	D	I	S	I	S	E	R
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J	W	C	P	Y	R	A	M	I	D	I	O	N	H	T	E	A	A	A	C	D
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U	O	A	P	R	Y	I	B	E	T	H	E	S	D	A	N	U	B	A	M	S
A	R	N	P	A	S	A	G	O	M	A	N	Y	G	A	N	A	K	H	T	I
I	M	M	T	H	E	R	M	O	P	Y	L	A	E	K	U	W	E	I	T	S

22 City of Canaan, west of Jordan
AI _ _

23 famed last stand
PRYTHEMOLEA _ _ _ _ _ _ _ _ _ _ _

24 Egyptian astrolabe
MERKHET _ _ _ _ _ _ _

25 land transport
DGLEES _ _ _ _ _ _

26 historic pool in Jerusalem
SDABEETH _ _ _ _ _ _ _ _

27 Nabatean capital
TRAPE _ _ _ _ _

28 Represented as a human-headed bird
BA _ _

29 Cyrus's winter capital
LYONBAB _ _ _ _ _ _ _

30 where Christ prayed
HTSEMENGAE _ _ _ _ _ _ _ _ _ _

31 named Cyrus before his birth
NEILDA _ _ _ _ _ _

32 three-tiered warship
TRIREEM _ _ _ _ _ _ _

ANSWERS: 1. Ophel 2. Kuwait 3. Hoplite 4. Spain 5. Danube 6. Akh 7. Sardis 8. Satrap 9. Bay 10. Iaa 11. Xerxes 12. Ka 13. Pasargadae 14. Buckskeesh 15. Hellespont 16. Great-Zimbabwe 17. Pyramidion 18. Herodotus 19. Xenophon 20. Anatolia 21. Joshua 22. Ai 23. Thermopylae 24. Merkhet 25. Sledge 26. Bethesda 27. Petra 28. Ba 29. Babylon 30. Gethsemane 31. Daniel 32. Trireme

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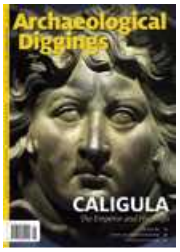

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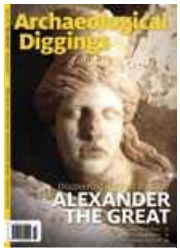

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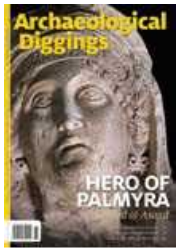
V 22 N 4

V 22 N 5



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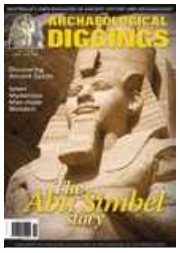
V 21 N 1



V 21 N 2

V 21 N 3

V 21 N 4

V 21 N 5

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V 20 N 1

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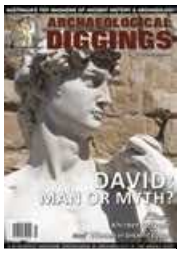


V 20 N 3

V 20 N 4

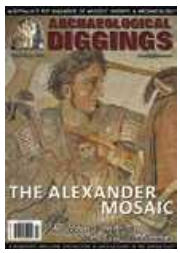
V 20 N 5

V 20 N 6

V 19 N 1

V 19 N 2

V 19 N 3

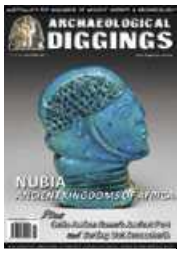


V 19 N 4

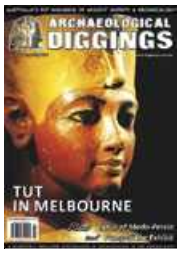
V 19 N 5

V 19 N 6

V 18 N 1



V 18 N 2



V 18 N 3

V 18 N 4

V 18 N 5

V 18 N 6

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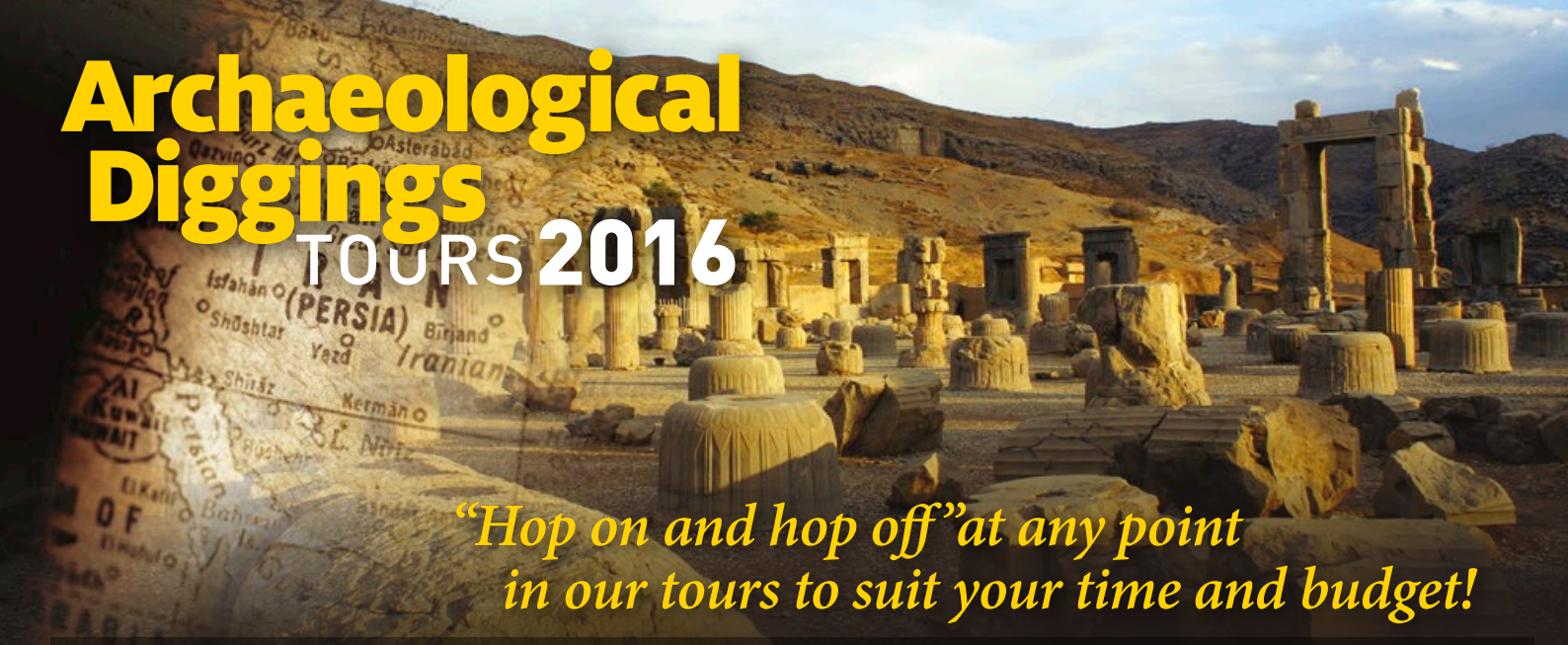

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